15-68

IMPERIAL IRRIGATION DISTRICT

OPERATING HEADQUARTERS • P. O BOX 937 • IMPERIAL CALIFORNIA 92251

October 1, 1998

Mr. Bill Rinne, Area Manager
U.S. Bureau of Reclamation
P.O. Box 61470
Boulder City, NV 89006-1470

Subject: RPA Provision 13 (b)

Dear Mr. Rinne:

Set forth below are the comments of the Imperial Irrigation District (IID) in regard to the Bureau of Reclamation's (Reclamation) draft response to RPA 13(b) which is a component of the Biological Opinion issued by the U.S. Fish and Wildlife Service (FWS) on April 30, 1997.

A. General Comments

1. IID believes it is critical to remind Reclamation and the FWS that section 7 consultation between Reclamation and the FWS is limited to the narrow range of *discretionary operations* carried out by Reclamation within the lower basin. In our review of documents relating to matters such as the Biological Opinion, RPA 13 (a), RPA 13(b), and the Multi-Species Conservation Plan (MSCP), we find that the "discretionary" part of the description is often omitted, leaving the impression that the FWS is looking at the full range of lower basin operations in the context of the Endangered Species Act (ESA). In fact, Reclamation's range of discretionary operations is in reality very narrow and small in contrast to the much broader range of non-discretionary or *ministerial* operations which are controlled by statutes, decrees, contracts, and the like. As a consequence, RPA 13(b) is to some degree a function of "wishful thinking" on the part of the FWS, suggesting that Reclamation's narrow range of discretion can somehow be enlarged by administrative action or cooperative efforts with non-Federal parties. While IID is open to the possibility that there may be minor areas of flexibility, especially with the cooperation of non-Federal entities, we all need to be realistic about the significant legal confines within which Reclamation operates in the lower basin.

2. In the draft RPA 13(b) document, and other related documents, Reclamation often characterizes this 13(b) effort as "a way to find water for fish and wildlife needs." IID suggests that this is an inappropriate mischaracterization which does not track the direction of the Biological Opinion. In RPA 13(b) the FWS asked Reclamation to investigate ways to enlarge the narrow range of discretionary operations that Reclamation had described in its Biological Assessment. That direction did not say: "find water for fish and wildlife needs." The fact is that endangered or threatened species in the lower basin may benefit from all sorts of actions, for example: deciding when and where to dredge whether to set aside lands or backwater areas for habitat, whether to adjust reservoir release schedules, etc. In other words, there is not direction or mandate to *focus on* finding water for fish and wildlife needs. Such characterization misconstrues the direction of RPA 13 (b) which is protection of the species and places unnecessary and inappropriate emphasis on water rights and water allocations as the focal point of ESA solutions within the lower basin.

3. Finally, IID suggests that Reclamation and the FWS need to maintain the appropriate distinction between the section 7 consultation on the one hand and the MSCP process on the other hand. While we appreciate that the two processes are linked (see, for example, page 4 of the Biological Opinion), there is a *significant difference* between the limited scope of the section 7 consultation and the much broader scope of the MSCP. As noted above, the section 7 process is very narrow, applying only to Reclamation's discretionary lower basin operations. On the other hand, the MSCP is a voluntary action by the participants to set in place projects and actions designed to assist in the protection of species largely in anticipation of future actions wherein federal approvals of one sort or another will be needed. State differently, since the RPA 13(b) document is a direct product of the section 7 consultation, any alternatives seriously discussed or considered by Reclamation under the authority of that process should respect the necessary linkage to Reclamation's very limited discretion in the area of lower basin operations.

B. <u>Comments Regarding Specific Alternatives</u>

1. #2 – Flood Control Water – one of the major problems with this component of the RPA 13(b) draft is that it totally ignores the fact that entities within the lower basin have rights to surplus or flood flow water. Among the lower basin states that water is divided 50 percent to California, 46 percent to Arizona, and four percent to Nevada. IID assumes that in many years the states will make full use of these surplus apportionments, and in fact the 1964 decree allows other states to use such surplus water if a state cannot use all of its apportionment in that year. Also, within each state various users have rights to surplus water, and many of those entities use surplus water in significant quantities when available. Finally, even Mexico has rights to surplus water, and in the future we do not know exactly how Mexico's rights will be handled when there is only a limited amount of surplus water available within the lower

basin. The point is that by not discussion these facts the reader of the draft RPA 13(b) document obtains the notion that such water is readily available for use for the purposes of enhancing fish and wildlife needs when in fact there may not be much flood flow water available for those purposes given existing rights and contracts.

2. #3 – Instream flow opportunities – IID has already submitted comments on this particular alternative (see letter to Laura Herbranson dated August 26, 1998, copy attached)

3. #4 – Water conservation measures – the draft RPA 13(b) document uses the phrase "extraordinary water conservation measures" as though this is a requirement of the law that the reader must take into account. However, to our knowledge there is no such requirement in any federal statute or regulation. In fact, applicable federal law states that the Secretary is to encourage "prudent and responsible water conservation measures" which are "shown to be economically feasible...." 1982 Reclamation Reform Act, section 210, 43 USC 390jj. (See also 43 CFR part 427). Similarly, Reclamation has misquoted the applicable state law. As stated in the RPA 13 (b) document: "Under California law, water conserved through extraordinary water conservation measures or saved through land fallowing measures is considered to have been beneficially used." In fact, section 1011 of the California Water Code provides, in part: "When any person entitled to the use of water under an appropriative right fails to use all or any part of the water because of water conservation efforts, any cessation or reduction in the use of such appropriated water shall be deemed equivalent to a reasonable beneficial use of water to the extent of such cessation or reduction in use." (Emphasis added.)

   The point here is that Reclamation should attempt to ensure that it is accurately reflecting applicable law when it outlines such alternatives for the reader. The notion of "extraordinary" conservation measures is reflective of an attitude held by Reclamation, but it is not grounded in either Federal or California law. The phraseology therefore confuses the reader's understanding as to the underlying viability of this alternative.

   Also, within the context of this alternative Reclamation discusses the possibility of fallowing, but there is absolutely no mention of the economic hardship and social dislocation that fallowing may bring to a farming community. When land is taken out of production there are secondary impacts throughout the community in the form of less spending on labor, supplies, seed, fertilizers, etc. For districts like IID, this is an issue of major importance and therefore we believe that a well-balanced discussion of alternatives such as these should present all sides of the picture in regard to the limited viability of measures such as fallowing.

4. #5 – Buy or lease water – IID is not pleased to be mentioned in this section as a possible source for water through purchase or lease of lands. First, we reiterate what

was said above in regard to fallowing, which we assume is what is intended as the source of water in this alternative. Second, the RPA 13 (b) document does not explain to the reader that water entitlements, such as that for IID, are held by the district and not the landowners. See Bryant v. Yellen, 447 US 352, 371 (1980). Also, the IID Board of Directors has taken firm policy positions in opposition to the use of fallowing for water conservation purposes. Accordingly, it is not appropriate to consider the purchase of farmland, fallowing of the land and use of water for fish and wildlife purposes. Again, this kind of detail is misleading for the readers who must understand the viability, or lack thereof, for alternatives such as these.

5. #6 – Intentionally created unused apportionment – the discussion in this section does not explain that this issue, and this method of "creating water" in the lower basin, is being addressed at this time in the context of Reclamation's draft off-stream banking regulations. In the process of finalizing the regulations there has been a great deal of discussion as to whether individual entities *or only state entities* will be able to create such "intentionally created unused apportionment" water. Omitting this information simply operates to mislead and confuse the reader. If Reclamation is going to discuss alternatives such as this in the RPA 13(b) document, it should do so with a thorough explanation of the process to be followed, the difficulties connected to the idea, and other related matters.

In summary, IID suggests that the draft RPA 13(b) document is deficient in many respects and therefore needs to be rewritten. Also, IID agrees with the comments of others in that many of the alternatives advanced for discussion in this document would be better suited for possible inclusion in the MSCP process and do not fit in the context of the section 7 consultation where Reclamation's discretionary authority is very limited.

Thank you for giving consideration to our concerns. Should you have any questions, please contact Michel Remington at 760-339-9149 or Bill Swan at (602) 941-5339.

Sincerely,

MICHAEL J. CLINTON
General Manager

United States Department of the Interior

BUREAU OF RECLAMATION
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

IN REPLY REFER TO:
LC-2704
ENV-7.00

SEP 0 1 1998

To: Interested Parties

From: ACTING FOR Robert W. Johnson
Regional Director

Subject: Review of Draft Provision 13(b) of the Reasonable and Prudent Alternative

Enclosed for your review is a draft of the Bureau of Reclamation's response to provision 13(b) of the Reasonable and Prudent Alternative (RPA) in the Fish and Wildlife Service's Biological Opinion (BO) for ongoing operation and maintenance activities on the Lower Colorado River. As discussed at the August 4, 1998 public forum meeting at McCarran International Airport in Las Vegas, the deadline for comments on this document is October 1, 1998. Then the final document will be developed and submitted to the Fish and Wildlife Service on or before October 30, 1998 which meets the 18 months schedule to provide this account after the date of the completion of the BO.

Please direct any comments or questions to Mr. Bill Rinne of my staff. Mr. Rinne can be contacted at 702-293-8414 for further assistance.

Enclosure

Identical letter sent to those on attached list

EXECUTIVE SUMMARY

This account is provided to the Fish and Wildlife Service (Service) to comply with Provision 13(b) of the Reasonable and Prudent Alternative in the Service's April 30,1997 Biological and Conference Opinion on Bureau of Reclamation (Reclamation) Lower Colorado River Operations, Maintenance, and Sensitive Species Activities.

Provision 13(b) states: Reclamation will identify any opportunities to increase that discretionary action flexibility with the other parties. The specific parties will be named in each case. This account will be provided within 18 months after the date of completion of the final BO.

The Service added that "This component is intended to determine the legal, regulatory, and contractual limits on Reclamation's ability to manage the river. It will also assist in identifying other parties with action flexibility, determining the need for section 7 or section 10 discussions with those parties, and determining their involvement in the MSCP Steering Committee." Reclamation will then present a public forum for discussion of the limits on its discretion and on how additional water may be found for fish and wildlife; this may be done in conjunction with the annual public meetings called for in provision number 16, below, on progress evaluation."

Fourteen meetings were held with stakeholder groups in Arizona, California, and Nevada during June and July 1998 to further discuss the limits of Reclamation's flexibility in managing the Colorado River and to identify potential opportunities to collaborate with other parties to increase flexibility, if necessary, to meet fish and wildlife needs. A public forum was then held on August 4, 1998 in Las Vegas, Nevada to discuss the results of these meetings and ways to find water to accommodate fish and wildlife needs. Participants were invited to submit letters of comments at that meeting and also were provided a draft copy of this report in September 1998.

As part of the previous process, Reclamation developed short descriptions of actions or strategies that are associated with its management of the Colorado River. These strategies were presented at stakeholder meetings to gather input on potential ways to manage Colorado River water to help meet needs of fish and wildlife resources.

Although most stakeholders seemed to express a general willingness to help meet needs of fish and wildlife, they questioned whether the 13(b) process was the proper way to approach this issue. A common theme of comments was that 13(b) is premature because it is looking for water and flexibility without identifying the specific needs of wildlife. Further, several of the participants in the Lower Colorado River Multi-Species Conservation Program (MSCP) felt that this activity should be turned over to the MSCP, because this is where the specific needs of fish and wildlife such as quantity, location, and timing are being developed and conservation elements identified. Concern was also expressed that the Service and Reclamation have yet to respond to comments by interested parties on the April 30,1997 Biological Opinion.

In general, it appears that some limited opportunity exists to increase flexibility in managing the Colorado River to accommodate fish and wildlife needs through collaboration with entitlement holders, power users, and the lower division states. The parties that could help with this issue are all stakeholders that are active in development of the MSCP. Mexico was not contacted during our information gathering process, but in the event it is determined that some fish and wildlife needs could best be met in the future by implementation of actions in Mexico, Mexico would be involved at the appropriate time.

REASONABLE AND PRUDENT ALTERNATIVE

PROVISION 13b

DRAFT

INTRODUCTION

The Bureau of Reclamation formed an internal team to develop a strategy to fulfill provision 13b requirements. One of the first tasks was to identify potentially interested stakeholders. Reclamation met with fourteen (14) stakeholder groups to discuss the limits on Reclamation's discretion and to obtain input on how additional water may be found for fish and wildlife purposes. The stakeholder groups were:

- Tribes
  - -Fort Mojave Indian Tribe
  - -Chemehuevi Indian Tribe
  - -Colorado River Indian Tribes
  - -Quechan Indian Tribe
  - -Cocopah Indian Tribe
- Upper Basin States
- Environmental Organizations
- Lower Division States
- California Interests (CRB, Water, Power, CDFG)
- Arizona Interests (ADWR, Water Users, AGFD) in Phoenix and Yuma
- Power Interests
- Nevada Interests (CRC, SNWA)
- Federal Agencies

This report lists each strategy as well as the comments received from the stakeholders. Other alternatives and overall issues associated with provision 13 are also included.

PROVISION 13 ISSUES

During the stakeholder meetings, comments regarding the provision were expressed by stakeholders. They are as follows:

◆ Concern about where this report will go.

◆Include in the report that FWS should "back off" and turn it over to the MSCP.

◆Presentation of these initial strategies gives the perception of the Secretary's discretionary limitation.

◆Provision 13 is beyond the scope of the Biological Opinion.

◆ Needs and quantity for the water are not yet identified. This is "putting the cart before the horse".

◆ Should rely on MSCP process to determine needs for fish and wildlife.

◆RPA 13b should come after MSCP process and not before.

◆Some stakeholders have not received response to comments on the April 30, 1997 Biological Opinion.

◆Where is the money going to come from for implementation?

◆Cost-effectiveness has not been determined for any of the approaches mentioned.

◆There are some legal obstacles to these strategies that violate contracts, law, and guarantees.

◆The Fort Mojave Indian Tribe has development plans on the bank lines so the integrity of them must be maintained. They have a total of 12 miles of bank lines in Nevada, Arizona, and California.

◆What benefits will this water have? The Power Board of Directors does not see any value received for the water so they are hesitant to give up water.

◆Competition for Salton Sea water.

WATER AVAILABILITY

All Colorado River water annually available to the Lower Basin in normal conditions (7.5 maf) is apportioned among the three Lower Division States of Arizona (2.8 maf), California (4.4 maf) and Nevada (0.3 maf). All use of Colorado River water, except for certain Federal establishments present perfected rights (PPR's), must be pursuant to valid water delivery contracts with the Secretary for permanent service. Those Federal establishments PPR's identified in Article II(D) of the 1964 Decree in *Arizona v. California, et al.* are not required to have contracts.

STRATEGY 1: SYSTEM LOSSES

All Colorado River water usage is accounted for. Under the accounting system, evaporation losses and phreatophyte use along the Colorado River or its reservoirs are called system losses. In the Lower Basin, system losses average 1.75 maf/year. This includes an average of 1.235 maf/year of evaporation losses for Lakes Mead, Mohave, and Havasu, and an average 0.515 maf/year for phreatophyte use. One option is to replace lower quality habitat with higher quality habitat and continue to charge the use as system loss to sustain the habitat without an increase in system loss.

Comments

◆Quail bush is the only vegetation habitat identified in Reclamation's Vegetation Management Study that is considered high quality habitat.

◆Does this alternative provide for additional water to sustain replacement vegetation?

◆Salt cedar is considered low quality habitat but is valuable habitat to the Colorado River Indian Tribe as a nesting area for doves which is an income for the Tribe.

◆When a replacement of habitat occurs, measures should be taken so that endangered species are not disturbed.

◆Consider measures one has to take in order for salt cedar not to grow back.

◆Difference of water saved, for example salt cedar vs. cottonwood, is very minimal if any.

STRATEGY 2: USE OF FLOOD CONTROL WATER

The Fish & Wildlife Service or a private party may be able to use flood control water, when it is available, for MSCP purposes. Flood control releases refer to water released in accordance with flood control criteria established by the U. S. Army Corps of Engineers which is in excess of requirements of downstream entitlement holders. Flood control releases refer to both release of water through the spillway when the reservoir is full and anticipatory flood control releases that are made to create reservoir storage space for anticipated runoff in order to avoid larger, uncontrolled releases through the spillways. The MSCP could take advantage of flood control releases as they occur (e.g. flooding backwater areas). Flood control water would not be charged against any state's apportionment.

Comments

◆If small releases are made in the first place, there would be no need to release water for flood control purposes.

◆Any anticipatory flood control releases need to be planned well.

◆There is a perception that areas prepared for wildlife preservation would obligate a party to keep the area wet.

◆This is just half of the equation. This is just to get the system started but need to look at the other side of maintaining what has been developed.

◆FWS always looked at temporary habitat as being better than no habitat at all which is very troublesome.

STRATEGY 3: IN-STREAM FLOW OPPORTUNITIES

Currently water is being diverted into the All-American Canal for delivery to Mexico at the Northerly International Boundary through the Siphon Drop and Pilot Knob Power Plants. One option for obtaining more in-stream flow through the Yuma Division is to keep more water within the channel and deliver it to Mexico at the Northerly International Boundary.

Comments

◆Need to be aware of the content of the water contracts.

◆A little more water in the channel may have benefits to one party but negative impacts to another, especially if it raises the ground water table in the Yuma area.

◆If channel is deepened through the sediment removal project, does adding additional in-stream flow provide water to the existing vegetation?

◆Power loss issue.

◆Look for additional in-stream flow opportunities in limitrophe and Mexico.

◆IID is adamantly opposed to this strategy because reductions (and possibly even elimination of power generation at Pilot Knob would cause operational concerns, the implications of which far outweigh any minor environmental benefits that may be anticipated.

◆IID has concerns regarding sedimentation build-up in the main channel near Mexico's diversion points and the effects of higher ground water levels in the Yuma area should All- American Canal distribution facilities not be utilized in Mexican deliveries.

◆Reroute water and keep it on the mainstem.

◆This water stops at Morelos therefore it doesn't benefit downstream uses.

◆Quick releases of water upstream has negatively affected farmlands downstream.

STRATEGY 4: PAY FOR WATER CONSERVATION MEASURES

The MSCP could pay for extraordinary water conservation measures and acquire the conserved water. Extraordinary water conservation measures means those measures that go beyond those

efforts that are required to ensure reasonable beneficial use. The MSCP could also pay for water savings under land fallowing agreements where irrigation districts could be paid to take land out of agricultural production. Under California law, water conserved through extraordinary water conservation measures or saved through land fallowing measures is considered to have been beneficially used. An eligible entity may be able to pay for those measures and obtain the conserved or saved water.

Comments

◆If water is made available through this strategy, could this water be sold? Conservation entities should accrue benefit from water conservation activities.

◆Short term leasing, as opposed to long term leasing for land fallowing, does not have any benefits.

◆Coachella and IID issues are to determine who the water belongs to irrespective of the environment aspects.

◆Fallowing may jeopardize species due to water loss.

◆Indian water rights settlements are still on-going.

◆This will become a bidding war, especially with California.

STRATEGY 5: BUY OR LEASE WATER

The MSCP could buy or lease water from other entitlement holders. Examples would be the purchase of land with associated water rights (i.e. Planet Ranch, Cibola, IID lands, etc.).

Comments

◆This has to be reviewed by a solicitor.

◆Concern whether or not this concept is consistent with the law of the river.

◆Several parties expressed interest in this concept.

◆If irrigated land is purchased and water is withdrawn from it, a result could be a loss of species that depend on that water.

◆If you purchased land like Planet Ranch, where would you put the water to use?

STRATEGY 6: ACQUIRE INTENTIONALLY CREATED UNUSED APPORTIONMENT

Under a cooperative agreement, an entitlement holder in a Lower Division State that is authorized to do so could decrease its consumptive use of Colorado River water, thereby developing intentionally created unused apportionment. The Secretary could release that intentionally created unused apportionment for MSCP purposes. This option is not a strategy, but rather a method to implement a strategy.

Comments

◆Do law and the rule making process need to be changed?

◆The cost of water would go up because of serious monitoring routine that needs to be done.

◆How would this play into the California 4.4 plan?

◆Change this strategy to "*unintentionally* created unused apportionment."

◆This is a long road.

◆Is giving the Secretary this additional discretion dangerous?

STRATEGY 7: BANKING WATER FOR MSCP PURPOSES

If the MSCP is able to acquire a source of water, it may be able to obtain a right to store that water in an offstream storage water bank through a cooperative agreement. Banked water would be available to the MSCP when it is needed for future consumptive use within a State for fish and wildlife uses, such as fish impoundments or vegetation. This option is not a strategy, but rather a method to implement a strategy.

Comments

◆If bank lines are done away with, this would be a possibility.

◆Identify whether water needed would be temporary or permanent. If water supply is permanent, it could be moved around.

◆Maybe there is a possibility of Department of Interior banking water. This issue is being revisited by one Federal agency.

◆This has merit but the timing is not right.

◆Point of diversion is a problem with the refuge.

◆It is hard to recover the water banked.

◆There is too much water needed for this kind of strategy.

STRATEGY 8: CHANGE THE TIMING OF WATER RELEASES AT HOOVER DAM

Currently, the Hoover electric service contracts entitle the contractors to ramping, regulation, spinning and non-spinning reserves. The amount of water available for power purposes is established by water orders for irrigation and domestic uses. The timing of releases may be limited by power plant capability and prudent power plant management practices.

Comments

◆Some groups feel that the Endangered Species Act has precedence over power contracts.

STRATEGY 9: CHANGE THE TIMING OF WATER RELEASES AT DAVIS AND PARKER DAMS

Currently, the Parker-Davis Project firm electric service contracts entitle the Parker-Davis contractors to receive their contractual maximum seasonal contract rate of delivery in any hour of the respective summer or winter season. If further restrictions are imposed on the timing of water releases through the Davis and Parker Powerplants, Western will make spot market purchases of any energy shortages created by this additional restriction. Alternative contractual arrangements will be possible when the existing contracts are renegotiated for electric service continuing beyond 2008.

Comments

◆Some groups feel that the Endangered Species Act has precedence over power contracts.

◆Parker/Davis is operationally integrated with Hoover.

◆California water users would like to continue power operation flexibility.

◆It's not a power issue, it's a water scheduling issue.

◆Not a great opportunity.

◆Fluctuating lake levels are unfavorable for fish and wildlife reasons but provide power benefits.

◆Spot market is undesirable from power users perspectives.

ADDITIONAL STRATEGIES

◆Negotiate leases for land areas owned by stakeholders for use to protect wildlife.

◆MSCP to pay for water conservation measures for BLM's concessionaires under their proposed contract for the Lower Colorado River Supply Project and use the water conserved for fish and wildlife.

◆Purchasing and leasing Upper Basin unused apportionment.

◆Unused surplus.

◆Purchase/lease unused Indian Water Rights.

◆Delist species.

◆Relax the water conservation requirements so that incidental habitats can be created. The less efficient the system is, the more habitats are created.

◆Allow wheeling.

◆Purchase Virgin River water.

◆Use ground water or drainage water for habitat.

◆Some groups feel that the Secretary has authority under the Endangered Species Act to designate water for fish and wildlife purposes.

◆Some groups feel that the Secretary should open up negotiations with Mexico to look for opportunities for water availability in Mexico and to discuss options of water flowing from the U.S. down to Mexico.

◆Obtain wetlands water for beneficial use. This would count against the state's apportionment and the quality of water must be maintained to grow fish.

◆Revisit Colorado River compact.

◆Drain Lake Powell.

◆Clarify the objectives of Las Vegas Wash.

◆Utilize high ground water in the Yuma Area.

◆Dredge river for additional capacity.

STATE OF CALIFORNIA—THE RESOURCES AGENCY PETE WILSON, Governor

COLORADO RIVER BOARD OF CALIFORNIA
770 FAIRMONT AVENUE, SUITE 100
GLENDALE, CA 91203-1035
(818) 543-4676
(818) 543-4685 FAX

September 30, 1998

Mr. William E. Rinne
Area Manager
U.S. Bureau of Reclamation
Boulder Canyon Operations Office
P.O. Box 61470
Boulder City, NV 89006-1470

Dear Mr. Rinne:

Thank you for the opportunity to provide comments on the draft "Reasonable and Prudent Alternative 13 (b)" [RPA 13 (b)] document which was distributed on September 1, 1998. Although the Board does not necessarily agree with or support the strategies or conclusions, the document appears to adequately reflects the comments provided to Reclamation by the California stakeholders at the meeting with California water and power entities on July 16, 1998. Furthermore, at this juncture, the document should not be expanded.

The Colorado River Board of California has consistently maintained that RPAs 13 (a), and (b) are beyond the scope of the Biological and Conference Opinion (BO) dated April 30, 1998, and should be deleted or, at least, not be considered until the Lower Colorado River Multi-Species Conservation Plan is completed, and species and habitat needs are identified in the Multi-Species Conservation Plan (MSCP). In addition, we have not received a response to our comments on the BO, which were provided to you on November 19, 1997, and December 1, 1997.

The Colorado River Board recognizes that the Bureau of Reclamation has agreed to comply with the provision of RPA 13(b). The draft document appears to be sufficient to meet the requirements of that RPA, and we believe it would be inappropriate and premature to proceed with any further action on this issue until the MSCP is completed.

The Board appreciates the opportunity to provide comments on this matter. If you have any questions, please call either Fred Worthley or me at (818) 543 4676.

Sincerely,

Gerald Zimmerman
Executive Director

ESTABLISHED IN 1918 AS A PUBLIC AGENCY

COACHELLA VALLEY WATER DISTRICT

POST OFFICE BOX 1058 • COACHELLA, CALIFORNIA 92236 • TELEPHONE (619) 398-2651

September 18, 1998

File: 0506.36

The Honorable Bruce Babbitt
Secretary of the Interior
1849 C Street, N.W.
Washington, D.C. 20240

Dear Secretary Babbitt:

I am writing to express to you our concerns about a critical issue concerning the Lower Colorado Multispecies Conservation Plan (LCRMSCP). As you know, the LCRMSCP is an ambitious attempt to create a plan, under the auspices of the Endangered Species Act (ESA), to meet the needs of endangered and other species of concern while allowing continued economic use of the river.

The LCRMSCP will cover a large number of species of varying legal status across a wide range of habitats: aquatic, riparian and terrestrial. The LCRMSCP steering committee membership is extremely broad including federal agencies, Indian tribes, state agencies, agricultural and municipal water users, power users, recreational groups and environmental entities.

The sheer complexity of dealing with such broad ranges of species and affected parties demands a flexible approach. We are concerned that there are apparently some Department of Interior (Interior) staff who feel that the LCRMSCP should be treated under Section 7 of the ESA, i.e., as a strictly federal consultation. We strongly disagree. It is our opinion that Section 7 of the ESA lacks both the flexibility, and even the authority, to make the LCRMSCP a success. The LCRMSCP can work only with the full active participation of the affected nonfederal parties.

We urge you to allow the LCRMSCP steering committee and Interior staff directly involved in the LCRMSCP to craft a hybrid Section 7-Section 10 vehicle for its execution. At the very least, we ask that you allow the involved Interior staff to determine the form of the plan and not allow it to be dictated by relatively distant and uninvolved supervisors.

Thank you for your consideration. If you have any questions please call me.

Yours very truly,

/s/ Tom Levy

Tom Levy
General Manager-Chief Engineer

cc: Gerald Zimmerman
Colorado River Board of California,
770 Fairmont Avenue, Suite 100
Glendale, California 91203

RT:cb\eng\aqtic\98\xep\babbitt

COPY

1120 CONNECTICUT AVENUE, NW
SUITE 900
WASHINGTON, DC 20036
(202) 857-0166 FAX (202) 857-0162

September 3, 1998

Mr. Gerald R. Zimmerman, Chairman
Lower Colorado River MSCP Steering Committee
770 Fairmont Avenue, Suite 100
Glendale, CA 91203-1035

Dear Mr. Zimmerman:

We are pleased to advise you that the Board of Directors of the National Fish and Wildlife Foundation has approved a challenge grant of $478,155 to the Lower Colorado River MSCP. This Grant is awarded specifically to support the six restoration and management projects outlined below. This amount represents $159,385 in NFWF federal Matching Funds (provided to NFWF by the Bureau of Reclamation and U.S. Fish and Wildlife Service) and $318,770 in non-federal Challenge Funds. It is my understanding that the Steering Committee has approved the allocation of $100,000 in the Year 2 MSCP/Interim Conservation Measures budget to matching these projects (referenced below as MSCP Match). Given the interest in getting these projects underway, the commitment of these matching funds is important. The following six projects are slated for support:

1. Project: Havasu National Wildlife Refuge Riparian Revegetation
   Grantee: U.S. Fish and Wildlife Service.
   Grant: $39,100 NFWF Share; $24,532 MSCP Match; $53,668 Other Non-Federal Match
   Status: NFWF staff in process of contacting Greg Wolf to refine project information and initiate project.

2. Project: Bill Williams National Wildlife Riparian Protection.
   Grantee: U.S. Fish and Wildlife Service
   Grant: $9,583 NFWF Share; $6,013 MSCP Match; $13,154 Other Non-Federal Match
   Status: NFWF working with Nancy Gilbertson to refine the project and determine methodology.

3. Project: Brown-headed Cowbird Trapping Project
   Grant: S18,900 NFWF Federal Funds; $37,800 Challenge
   Grant: $18,900 NFWF Share; $11,858 MSCP Match; $25,942 Other Non-Federal Match
   Status: NFWF informed that project is being conducted as a mitigation credit by Bureau of Reclamation. NFWF in process of verification.

4. Project: Achii Hanyo Endangered Fish Rearing Facility.
   Grantee: U.S. Fish and Wildlife Service
   Grant: $33,333 NFWF Share; $20,914 MSCP Match; $45,753 Other Non-Federal Match
   Status: We will be contacting Dr. Minkley to proceed on project.

5. Project: Relict Leopard Frog Refugium Development project
   Grantee: National Park Service
   Grant: $4,155 NFWF Share; $2,607 MSCP Match; $5,703 Other Non-Federal Match
   Status: NFWF in process of contacting Ross Haley to initiate contracting process.

6. Project: Twin Lakes Wildlife Habitat Restoration
   Grantee: Fort Mojave Indian Tribe
   Grant: $54,313 NFWF Share; $34,077 MSCP Match; $74,550 Other Non-Federal Match
   Status: NFWF will contact Ruth Ann Henry to proceed on the project. We have been in touch with the tribal coordinator Rick Boyd and have received a letter on challenge funds, so project is underway.

As these projects progress, the Foundation will keep Fred Worthley appraised of project status. We look forward to continuing to work with you on conservation projects on the Lower Colorado River.

Sincerely,

Whitney Tilt

Whitney Tilt
Director of Conservation Programs

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INTERSTATE STREAM COMMISSION

P.O. Box 25102
Santa Fe, New Mexico 87504-5102

FAX TRANSMITTAL COVER SHEET

DATE: October 8, 1998

TO:

David Kennedy:	(916) 653-6985
Gerald Zimmerman:	(818) 543-4685
Richard Bunker:	(702) 735-4620
Pat Mulroy:	(702) 258-3268
Rita Pearson:	(602) 417-2415
Larry Anderson:	(801) 538-7297
Jim Lochhead:	(970) 945-4921
Jeff Fassett:	(307) 777-3451
Wayne Cook:	(801) 531-9705
Jennifer Gimbel	(303) 866-3558
Hal Simpson	(303) 866-3589

FROM: Philip B. Mutz

CC: Thomas Turney
Ted Apodaca

SUBJECT: Meeting of Department of the Interior and Forest Guardians re: Notice of Intent to Sue

==========

YOU SHOULD RECEIVE PAGE 8 (S), INCLUDING THIS COVER SHEET. IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL (505) 827-6160.

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SUBJECT: Meeting of Department of the Interior and Forest Guardians re: Notice of Intent to Sue

Items noted during the subject meeting which was held from 1:15pm to 4:45pm October 5, 1998 in Santa Fe, New Mexico. The attendance list and an article about the meeting from the Albuquerque Journal are attached.

- Bob Snow opened meeting and advised that EPA could not have a representative at today's meeting.
- Charles Calhoun said information would be presented on Upper Colorado River, Rio Grande and Pecos River but nothing on Costilla Creek because of no Federal involvement. He asked if Guardians had any priorities regarding the four compacts.
- John Talberth, Guardians, said Rio Grande was the primary focus.
- John Hamil, USFWS, presented an overview of Upper Colorado River Recovery Program for endangered fish.
- Jennifer Fowler-Probst, USFWS, supplemented Hamil a with brief overview of San Juan River Recovery Program.
- Questions from Talberth, Potter, and Horning, Guardians, re programmatic EIS, acquisition of water rights for fish flows, monitoring of operation of reservoir releases, fish passages, flood easements, levee removal and water right transfers in relation to Compact deliveries (Colorado).

- Jack Garner, Reclamation, presented an overview of Reclamation reservoir operations on the Colorado River and tributaries in conjunction with Colorado Big Thompson and Fryingpan-Arkansas Projects with emphasis on releases from Reudi and other reservoirs for fish flows.
- Talbreth asked about flood control constraints on reservoir operations and apparently confused "contract water demand" to be "compact water demand".
- Christine Karas, Reclamation, presented an overview of remaining Reclamation projects in Upper Colorado River Basin.
- Horning, Talbreth, and Potter asked about water sales contracts, trigger for Aspinall Unit Section 7 consultation and overbank flooding.
- Mark Rucker, Reclamation, and Dick Kreiner, Corps of Engineers, presented an overview of Reclamation and Corps of Engineers projects in Rio Grande Basin from headwaters to mouth of Pecos River.
- Talbreth asked for summary of MOU's between Reclamation and Corps and other entities, flood control criteria, water quality monitoring, EIS addressing flexibility on compact deliveries and flexibility on constraints in authorizing legislation, noting that legislation is not "set in stone", and asked about reasonable and prudent alternatives.

- Potter asked about time lines for EIS, trigger for NEPA and compact obligations with focus on opportunity for alternative operation to meet delivery obligations; ie USFWS indicated room for flexibility in its recent report to Rio Grande Compact Commission.
- Horning asked about ownership of diversion dams on the river in the Rio Grande and Middle Rio Grande Projects.
- Rucker, with supplement by Kreiner, presented overview of Reclamation and Corps projects in Pecos River Basin.
- Talberth asked about reasonable and prudent alternatives to contaminant problems.
- Calhoun, in the wrap up, asked if there was any specific information desired by Guardians.
- Talbreth and Potter asked about water salvage and water quality management and Rio Grande Water Control Manual.
- Responses included Colorado River Salinity Control Project; Closed Basin Project; Middle Rio Grande and Grand Valley, Colorado, water salvage; water temperature of releases from Flaming Gorge and Glen Canyon; selenium in Stewart Lake, Utah; and mill tailings at Moab, Utah.
- Snow offered to provide more information as a follow up.
- Talbreth suggests follow-up meeting after digesting information provided. May offer specific requests at that time.

- Potter said EPA involvement needed and suggested telephone conference. Snow offered to contact EPA.
- Talbreth said Guardians overall are looking at Upper Colorado and Rio Grande with Pecos included in Rio Grande. Costilla will be pursued as an independent process and litigation is either in progress or contemplated. Talbreth asked to whom future contacts be directed. Snow replied himself and Reclamation's Albuquerque Area Office.

Only information and answers to Guardian's questions were provided. A reporter from the Albuquerque Journal was present but did not ask questions in the meeting. The reporter did talk to some of the federal representatives after the meeting. A copy of his article is attached. I can provide more information at the meeting on October 26, 1998 or in a telephone conference. Please let me know if a teleconference is desired.

PBM:rs

Attachment

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October 5, 19[redacted]

Information Meeting

Name	Affiliation	Phone
Christine Karas	USBR - Salt Lk City	801 524 3679
Will Tully	USBR - Loveland	970-962-4368
Jack Garner	USBR - Loveland, Co.	970-962-4300
Bob Snow	DOI - Wash DC	202-208-4379
Martha Crawls	DOI - Santa fe	(505) 988-6200
Herman Settemeyer	TWRCC - Austin	512-239-4707
Michael Gabaldon	USBR - Albuquerque NM	505 248 5357
Gerry M. Rowe	USBR Albuquerque, NM	505 248 5357
Bryan Bibs	Biologist - Forest Guardians	505-988-712
John Horning	Forest Guardians	(505) 988-9126
John Talbott	Forest Guardians, Santa Fe	(505) 988-9126
LORI POTTER	KHGK, Denver CO	303/296-9412
Darrell Riekenberg	Corps of Engrs, Albq, Counsel	505-342-3304
Dirk Kreiner	" " "	505-342-3383
Marc Rucker	Reclamation - Albq Area Off.	505-248-5330
BEVERLY CHLINE	DOI - SOL SOLICITOR'S - ALB.	505-346-2700
JENNIFER FOWLER-PROPST	USFWS - NMESFO	505-346-2525
JOHN HAMILL	USFWS - DENVER	303-236-8155 x252
Margot Zallen	DOI - Solic Office - Denver	303-231-5353 x446
Charles Calhoun	USBR - S.C.C., Ut.	801-524-3600
SAM HITT	Forest Guardians	505-988-9126
[illegible]	ABQ Journal	505-992-6200
Philip Mutz	N.M. Upper Colo. River Commissioner	505-827-6160
SUZANNE Hoffman Dooley	N.M. State Engineer Office	505-827-6149

Albuquerque Journal
10/7/98

Forum May Not Stop River-Compact Suits

BY IAN HOFFMAN
Journal Staff Writer

Federal water agencies are slowly tweaking the West's vast plumbing system of lakes and levees to serve natural ecology as well as humans.

Manmade floods blast down the Colorado River basin to rebuild river ecosystems, while federal biologists carefully rear fish largely useless in these rivers for decades.

This and more, at a cost of more than $60 million so far, still might fall short of placating environmentalists bent on restoring truly natural rivers.

Federal water and wildlife agencies tried this week with meager success to dissuade a Santa Fe environmental group from a threatened legal assault on Western water management.

"In fact, based on what I've heard today, there are certain aspects of litigation I think we should go forward with more quickly," said John Talberth, executive director of Forest Guardians, on Monday.

Talberth warned in May of plans to bring the nation's most powerful environmental laws — the Endangered Species Act, the Clean Water Act and the National Environmental Policy Act — to bear on four river compacts affecting six states.

These in essence are water contracts governing how much water each state must deliver to the next state downstream. The Rio Grande compact, for example, obliges Colorado to deliver certain water to New Mexico, and New Mexico to Texas.

Forest Guardians' actual targets are the operations of federal dams, irrigation works and the like over an area roughly a tenth of the continental United States. By damming and diverting water, those facilities dramatically alter the ecology of rivers. They all but eliminate floods, for example, that scientists say are crucial for regeneration of cottonwoods and for spawning success of endangered Southwest fish.

It is unclear, however, whether the interstate river compacts are an adequate legal umbrella for addressing operation of those federal water facilities.

Even so, more than a dozen federal water and wildlife managers spent four hours Monday at

See **FORUM** *on* **PAGE 3**

Albuquerque Journal
10/7/98

Forum May Not Stop River-Compact Suits

from **PAGE 1**

Santa Fe's DoubleTree Hotel, detailing government actions to restore endangered species and ecosystems in the Colorado and Rio Grande basins.

The nation's leading water bureaucracies — the Interior Department's Bureau of Reclamation and the U.S. Army Corps of Engineers — sketched out proposed studies of boosting Rio Grande flows to mimic natural flooding more closely.

Water managers in the Colorado River basin started such changes in the early 1990s, and so have a head start on recovering endangered species. One reason: The Colorado basin carries more water, and more potential for using water for ecological benefit, than the Rio Grande basin.

"There are major differences between New Mexico and up in Colorado as to the resources we can devote," pointed out Marc Rucker of the Bureau of Reclamation's Albuquerque district. "As far as control over water, we probably have less latitude to do good things for rivers and river habitat than in other basins in the West."

Talberth called the joint Bureau-Corps study of Rio Grande operations "encouraging." Yet he steered clear of saying Forest Guardians would reconsider its plans to sue, and federal attorneys arranged for another meeting.

"It's worth it to make an effort up front" to resolve potential litigation, said Bob Snow, an attorney at the U.S. Department of Interior headquarters and architect of Monday's meeting. "I'm hopeful. We took a first step: We had a meeting."

Said Talberth: "These agencies still seem to think they're hopelessly constrained by the existing system of water rights and these compacts. ... We will keep talking, but it's not going to prohibit us from filing suit."

IMPERIAL IRRIGATION DISTRICT

OPERATING HEADQUARTERS • P O BOX 937 • IMPERIAL, CALIFORNIA 92251

August 26, 1998

Ms. Laura Herbranson, Director
Resources Management Office
Bureau of Reclamation
P.O. Box 61470
Boulder City, NV 89006-1470

Subject: Comments – Reasonable and Prudent Alternative 13(b), Fish and Wildlife Service's Biological Opinion for Ongoing Operation and Maintenance Activities on the Lower Colorado River

Dear Ms. Herbranson:

On August 4, 1998 at McCarran International Airport in Las Vegas, Nevada the Bureau of Reclamation (Bureau) conducted a public forum concerning Reasonable and Prudent Alternatives 13(b) from the Fish and Wildlife Service's Biological Opinion for ongoing operation and maintenance activities on the Lower Colorado River. At this meeting, the Bureau recapped discussions with stakeholder groups that focused on identifying sources of additional flows for fish and wildlife purposes.

Of particular concern to the Imperial Irrigation District (IID) was the mention of bypassing the Pilot Knob Hydroelectric Plant (and possibly other power generation facilities on the All-American Canal) in order to maximize flows in the main channel. This idea was categorized as an "In-Stream Flow Opportunity" strategy and is adamantly opposed by the IID. In addition to the reductions (and possibly even elimination) of power generation at Pilot Knob, this strategy would cause operational concerns, the implications of which far outweigh any minor environmental benefits that may be anticipated.

The IID operates Imperial Dam and downstream facilities under the direction of the Bureau, but maintains sole responsibility for ensuring all deliveries to Mexico as well as portions of Arizona and Southern California. The use of the Pilot Knob facility affords our operational staff tighter control of deliveries to Mexico and reduces the likelihood of flows in excess of treaty obligations. Additionally, the travel time of deliveries to Mexico from Imperial Dam increases from two hours to as much as twelve hours when flows are kept in the main stem of the Colorado River and not routed through the Pilot Knob generation facility. Thus, by bypassing Pilot Knob, both the accuracy and efficiency of deliveries to Mexico are at risk. Finally, the IID also has concerns

regarding sedimentation build-up in the main channel near Mexico's diversion points and the effects of higher groundwater levels in the Yuma area should All-American Canal distribution facilities not be utilized in Mexican deliveries.

Thank you for the opportunity to comment on the issues addressed above that relate to Reasonable and Prudent Alternative 13(b). If you have any questions, please feel free to contact Ms. Tina Anderholt, Water Resources Engineer, at (760) 339-9038.

Sincerely,

M. J. Clinton

MICHAEL J. CLINTON
General Manager

TLA:mdr

cc: William Rinne, BOR
Dale Ensminger, BOR
Dee Bradshaw, IID-EA

August 25, 1998

Memo
To: Mike Clinton
From: Bill Swan
Re: Draft letter to BOR on discretion issue

Thanks for thinking to send the draft letter for my review. You probably recall that I prepared some extensive IID comments when the Bureau set forth their view of what was within their discretion in the lower basin operations. Under request from the FWS, BOR is now trying to figure out if there are ways of expanding that discretion, as they say "in cooperation with stakeholders."

This drill came up this summer in the context of the MSCP group and Michel R. sent me some paperwork on it. Unfortunately I was tied up on other matters and was not able to give it full attention. Now I assume there is a deadline for submitting comments to BOR on this further analysis of the discretion issue.

The purpose of this note to you is to say that I really need to study this and compare what we said earlier, and compare any other recent materials from BOR, other parties, etc. *So I am hoping that we have a little time on this?* I'll give you a call in the morning, and hopefully this can be one of the matters we can discuss tomorrow afternoon or evening. Bill

cc: Tina Anderholt

Alston—
talked to Bill Swan

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IMPERIAL IRRIGATION DISTRICT

OPERATING HEADQUARTERS • P. O. BOX 937 • IMPERIAL, CALIFORNIA 92251

GS-ECS

October 7, 1999

VIA FACSIMILE AND US MAIL

Tom Shrader
U.S. Bureau of Reclamation
Mail Code LC-2011
PO Box 61470
Boulder City, NV 89006-2422

Subject: Review Draft Lower Colorado River Multi-Species Conservation Program (LCRMSCP) – Chapters 1-3.

Dear ~~Mr.~~ Tom Shrader:

Thank you for providing the Imperial Irrigation District (IID) with the opportunity to review the subject document. I have the following comments:

1. The document should begin with an Executive Summary. Although the document is not complete yet, portions of the summary can be developed now.

2. Page 1, Section 1.1.1 - This first section under the Introduction should be the Background, not the Origin of LCRMSCP. The Background should include the importance of the Colorado River to the lower basin states, the amount of agricultural production, the number of major cities, the amount of hydroelectric power production, the recreational opportunities and the diversity of wildlife that is dependent upon this unique water resource. This section should also discuss the history of modifications of the river for flood control by construction of dams as well as the importation of exotic sport fish for fishing recreation. This kind of information will lead to an understanding of the importance of the goal of developing a MSCP while at the same time depict the monumental task of resolving issues of competing and at times conflicting demands on the river's ecosystem.

3. Page 1, Section 1.1.1., beginning of the fourth paragraph – This sentence does not clearly depict that the water and power users have more concerns than how the designation of critical habitat "could affect operations, maintenance and use of the Bureau of Reclamation's (Reclamation) Lower Colorado Region facilities." I think the broader view should be the user's concern that the designation may affect their ability to receive and use water and power for present and future demand, whether for agriculture, municipal, or

industrial requirements in the southwest. And that it may affect the cost associated with delivery and use of those resources.

4. Page 2, 3rd and 4th paragraphs - The structure of the Steering Committee and the purpose for participation by federal agencies, the States and local agencies needs to be relocated after Section 1.1.1. as a separate heading such as Structure of the LCRMSCP.

5. Page 1, 2nd paragraph and Page 2, 5th paragraph - While these paragraphs repeat the goal of developing a proactive, multi-species, ecosystem-based habitat management plan, they do not emphasize up-front the participants' desire that the LCRMSCP "accommodate current water diversions and power production and optimize opportunities for future water and power development . . ." This is brought out on page 5 under Purpose and Need. This should be stated at the first mention of the MOA in paragraph 5 on page 2.

6. Page 3, 3rd paragraph, last sentence and Page 9, 2nd full paragraph, last sentence – These two sentences are inconsistent. There should be no need for future consultation with FWS unless Reclamation has not identified a covered project within the document. This would only occur by an unforeseen future action by Reclamation and would therefore not be covered under the LCRMSCP. FWS' evaluation as identified on page 3 would not look toward the LCRMSCP since the conservation actions identified, and the money provided by stakeholders in the LCRMSCP will be obligated for the identified covered projects.

7. Page 4, Section 1.1.2. - The title of this section should be changed to Geographic Scope of the Program and Relationship with Other Ongoing Programs.

8. Page 4, 1st paragraph, 1st sentence - The wording "in general" should be replaced with "based upon improvements and restoration to the habitats that they require."

9. Page 4, after Section 1.1.3. - Would it be helpful to the reader to include a section on the types of habitat that are targeted for conservation actions and the associated species guilds (i.e. riparian habitat for rails, mesquite for neotropical passerines, cottonwood/willow for flycatchers, etc.)?

10. Page 8, 1st sentence - It is my understanding that this document will be a programmatic EIS/EIR. I believe that this sentence is the only mention of that fact in the introduction. It is not identified as programmatic at the first discussion of proposed action on page 6, the last paragraph. A section on the programmatic nature of this document should be included. It should discuss how the programmatic level of detail discussed in the document would differ from the site-specific detail which is being developed by the Site Analysis Group It should also discuss how certain actions identified in the different program alternatives might be implemented with those chosen from a different program alternative. It also needs to describe how broad policy alternatives and program-wide mitigation measures will be determined, modified and implemented (e.g. the adaptive management proposal and the criteria that will be used).

11. Page 8, Section 1.2.1.1 and Page 9, Section 1.2.1.2 Proposed Action - As co-lead agencies for NEPA compliance, the Proposed Actions for both FWS and Reclamation under Federal Actions should include preparation of the EIS, selection of the preferred program alternative and approval of the final EIS. Selection of the preferred program alternative and approval of the final EIR should be included under the Proposed Action under the Non-Federal Actions on page 11.

12. Page 91, Section (7.4), 1st sentence - Metropolitan Water District of Southern California should be included in this sentence as a municipal area that is actively seeking to acquire additional water.

13. Page 121, second to last bullet - The All-American Canal System should be removed as a covered project under Arizona and placed under Section 2.3.3. California Actions, B. Imperial Irrigation District.

14. Page 123, 7th bullet on top of page - Salton Sea Reclamation should be removed from B. Imperial Irrigation District.

15. Page 134, 2nd paragraph, last two sentences - These two sentences appear to contradict each other or some clarification is needed.

Please phone me at 760-339-9831 if you have any questions.

Sincerely,

Michel D. Remington

MICHEL D. REMINGTON
Supervisor, Environmental Compliance

cc: Jesse Silva, IID
John Eckhardt, IID
Elston Grubaugh, IID
Steve Knell, IID

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DRAFT 6/23/99

June 29, 1999

Regional Director
Lower Colorado Region
Attention: Jayne Harkins
Bureau of Reclamation
P.O. Box 61470
Boulder City, Nevada 89006-1470

Colorado River Board of California's Comments on the Development of Surplus Criteria for Management of the Colorado River

Dear Ms. Harkins:

The Colorado River Board of California (CRB) submits the following comments on the development of surplus criteria for management of the Colorado River on behalf of the State of California and the CRB member agencies in response to the Federal Register notice dated May 18, 1999 soliciting comments on this matter.

As the Bureau of Reclamation (USBR) and the Department of Interior (DOI) are well aware, the CRB has been developing a plan that demonstrates how the California agencies will be able to meet their Colorado River water needs from within California's basic annual apportionment of 4.4 million acre feet (maf) when river conditions so dictate (the "California Plan"). Substantial progress in that regard has been made and the parties are currently working on specific conditions to be included in the California Plan in cooperation with DOI and the California Department of Water Resources (DWR).

The following comments are submitted in recognition that the California Plan is not yet complete and still requires further work. Accordingly, these comments assume that: (1) the negotiations between and among the Coachella Valley Water District (CVWD), the Imperial Irrigation District (IID), the Metropolitan Water District of Southern California (MWD), in coordination with DOI and DWR regarding the administration of the agricultural entitlements within California will be successfully completed; and (2) the California Plan will be successfully completed by the CRB, agreed to by the parties to the California Plan, and the plan provisions accepted by DOI. If either of these two assumptions should fail to come to fruition, then agencies within California will be submitting supplemental, separate comments espousing the

viewpoints of individual agencies on the issue of the appropriate surplus criteria and these comments will cease to be the California position.

In accordance with the Federal Register notice, comments are provided in the following categories: the format for the criteria; the scope of specific surplus criteria; and the issues and alternatives that should be analyzed. The following comments are somewhat general in nature due to the fact that the Federal Register notice indicates that this process is at a scoping stage and that there will be further consultation with the parties pursuant to the NEPA process and Section 602 of the Colorado River Basin Project Act, as amended. More specific comments will be provided by the CRB on an ongoing basis as this process develops.

General Comments

The ~~c~~Criteria for Coordinated Long-Range Operation of the Colorado River Reservoirs (LROC) ~~define the multi~~reflect the multiple-purposes for which the reservoir system is operated. Resource management to satisfy the growing needs of these purposes requires the optimization of the operation of the Colorado River system reservoirs. The Colorado River has been widely developed through great investments by the federal government and many water and power agencies to provide system storage of more than 60 million acre-feet. The reservoir system and its extensive storage allows the operation of the Colorado River to be efficiently managed so as to optimize the beneficial use of this resource which supports more than 20 million people and a multi-billion dollar farming economy.

The governing ~~historic~~ view of river operations during the development of the LROC anticipated that the level and growth of water needs for this period and beyond would be such that little or no surplus water would occur, and did not contemplate a prolonged interim period of surplus water. Most efforts ~~for more specific criteria~~relating to reservoir operations in the development of the ~~current Criteria for Coordinated Long-Range Operation~~ focused on shortage criteria. Consequently, ~~the Colorado River is managed so as to maximize the short-term amount of water held in storage~~Colorado River management leans toward maximizing the amount of water held in storage in the near term. This strategy tends to force more flood control releases in wet years, in excess of downstream needs and the ability to divert and store such water for subsequent use. In dry years, this strategy leans towards not releasing water to users even though there is a high probability for the next fifteen years of surplus water releases in excess of needs and the ability to store and divert such water ~~for the next fifteen years~~. Overall, this strategy does not optimize the beneficial use of this valuable resource because it does not take full advantage of the high volume of storage created by the extensive infrastructure ~~which has been created~~ on the river.

DRAFT 6/23~~4~~/99

Surplus criteria beyond that currently provided is needed to guide reservoir operations to ~~help optimize~~assist in optimizing beneficial use of surplus water while keeping risk of shortages ~~to a minimum~~minimal. A strategy of more specific criteria to cover the period of 200~~0~~1 through 2015 would provide for more effective and efficient use of Colorado River water by ~~making~~providing for steadier releases over longer periods of time, reducing the need for flood control releases in excess of downstream needs and the ability to divert and store such water for subsequent use. ~~More predictable releases could also benefit the planning required for developing multi-species conservation programs.~~

Surplus criteria based on these guidelines would promote water use efficiency, and provide increased reliability and predictability to Colorado River water users. Predictability would allow water agencies to more effectively plan for the future, and more efficiently allocate limited resources as appropriate. More predictable releases could also benefit the planning required for developing the Lower Colorado River Multi-Species Conservation Program

To meet these objectives, the CRB believes that surplus criteria ~~must~~should address the following general principles:

- Protect states' and water users' existing water rights and apportionments ~~with regards to both quantity and quality~~;
- ~~Maximize the~~Optimize the use of available water ~~use~~ within the United States, while not significantly increasing the potential for shortages to users;
- Provide needed flexibility for water users in meeting their water supply needs;
- Promote water conservation and the efficient use of Colorado River water by maximizing use of the large available storage capacity;
- Recognize third party and environmental impacts and, as appropriate, provide necessary compensation or mitigation;
- ~~Provide for an annual apportionment of water to be made available to users in the United States, based on consideration of identified relevant factors, which are consistent Basin wide;~~
- ~~Apportion mainstream~~Provide additional surplus water during the period of high probability ~~of~~ surplus water from 200~~0~~1-2015 consistent with ~~optimizing the beneficial use of this valuable resource with full~~ consideration of ~~the~~ expected runoff, total

consumptive use of the entire Basin, ~~the~~ water releases from the Upper Basin, and ~~the~~ existing reservoir storage;

- ~~Provide for meeting all United States water needs, including the storage of water, before providing Mexico the opportunity to schedule surplus deliveries.~~

Format for Surplus Criteria

The CRB believes that the format of the surplus criteria must meet four objectives. First, the criteria must provide agencies with a high degree of certainty which will allow agencies to rely upon the criteria for their planning decisions. Certainty protects agencies against sudden changes being made in the criteria ~~which allows~~allowing agencies the freedom to invest in various resources management strategies. Certainty is necessary before investments can be made in measures to help optimize the beneficial use of surplus water, such as off-stream groundwater storage projects. Second, in addition to certainty, the criteria must also provide a degree of flexibility that allow the parties to adapt the criteria to changed circumstances which we cannot foresee. Reservoir operations work with a number of constantly moving variables and reservoir operators must have some flexibility to do their job safely and efficiently. Third, the criteria need to be adopted expeditiously to take advantage of current storage conditions, to allow agencies to begin making changes in their resources management planning, and to help move the California Plan to closure by allowing for the timely implementation of measures that provide for California to meets its Colorado River needs within its basic apportionment. Fourth and finally, the criteria must be consistent with all relevant federal law and the Law of the River.

Consistent with these objectives, the CRB recommends that interim implementing criteria be developed pursuant to ~~Article III(3) of~~ the Long-Range Operating Criteria (LROC) set forth in Article III(3) as the preferred approach. These interim criteria would be used in conjunction with the LROC to develop the annual operating plan (AOP) ~~on an annual, basis.~~ Interim criteria can provide a high degree of certainty by their adoption ~~in~~through a formal process with public comment and input, and publication in the Federal Register. Certainty is enhanced through the five-year review process already present in the LROC which requires consultation with the Basin states and water users, before changes to the interim criteria can be implemented. By keeping reviews of the interim criteria on a five-year time frame, agencies can develop data and gain experience on how the interim criteria are operating without reacting to annual fluctuations.

By the same token, the five-year review process in the LROC provides flexibility through a process in which the interim criteria can be adjusted without requiring a lengthy administrative process ~~to make adjustments~~. The AOP ~~annual~~ consultation process will serve to put parties on notice of any concerns regarding the operation of the interim criteria which can then be addressed

DRAFT 6/23~~5~~/99

through the five-year review. This orderly process will prevent sudden or unilateral changes to the interim criteria while providing flexibility to adapt the interim criteria to changed conditions as circumstances warrant.

Just as importantly, development of interim operating criteria in this manner can likely be accomplished within a reasonable time frame. This allows the interim surplus criteria to provide more immediate benefits ~~to all the Basin states~~. Finally, development of interim criteria clearly fits within the existing framework of the Law of the River which provides a level of assurance and predictability to all parties.

If another approach is adopted to enact surplus criteria, such as revision of ~~the LROC set forth in~~ Article III(3) of the LROC or some other such approach, there could be an issue with regards to the length of time needed to enact the surplus criteria. If an approach were selected which takes more than 18 ~~to 24~~ months to adopt new surplus criteria, the CRB believes it would then be appropriate for the Secretary of the Interior to issue special short-term Secretarial guidance on availability of surplus water during the period in which the surplus criteria ~~we~~are being developed. This would allow efficient use of Colorado River water resources during a lengthy period of administrative activity.

There is a possibility that the California Plan will also require agreements to be reached ~~with~~among the Basin States on certain aspects of its implementation. Such agreements may impact certain issues with regards to surplus criteria and could influence what approach is most appropriate for consideration. This issue will have to be developed as part of the surplus criteria process on a parallel track with completion of the California Plan.

The Scope of Specific Surplus Criteria

As stated above, the overall objective of the ~~specific~~interim surplus criteria needs to be the optimization of beneficial use of available surplus water while keeping risks of shortage at a minimal level. To achieve this goal, the CRB believes that the surplus criteria must contain the following provisions.

- Criteria Must Be Interim – The surplus criteria that are developed through this process should be clearly marked as interim in nature. Conditions on the Colorado River indicate that demands and ~~flows~~water availability will ~~change~~vary over the next fifteen to twenty years and the issue of appropriate surplus criteria will need to be revisited in the future.

- Criteria Need A Specific Term – If the criteria are to be interim, it is appropriate that there be a specific term so that agencies can plan accordingly. Based on the hydrology

DRAFT 6/235/99

data that has been modeled, an appropriate term would appear to be for the years 20001 through 2015.

- Tiers of Surplus – Specific criteria should contain three tiers of surplus water that will be available depending on reservoir levels. When Lake Mead is full, releases of water would be available to all Lower ~~Basi~~Division users of Colorado River water for beneficial use. Each successive tier would provide for the release surplus water when Lake Mead is less full but would restrict the allowed uses of the surplus water. This encourages planning and conservation which leads to more efficient uses of available water.

- Surplus Triggers Should Be Tied To Reservoir Elevations – For each tier of surplus water that would be released, specific elevations at Lake Mead would dictate whether a release constituted a level one, two or three surplus release allowing for certainty in operation of the criteria.

- Reservoir Elevations Should Adjust Over Time – Rather than have static elevations, the trigger elevations in Lake Mead should adjust by a formula ~~for changed conditions and demand level~~related to Upper Basin use so as to allow for efficient use of water based on ~~actual not modeled conditions.~~the most current projected conditions as opposed to outdated conditions.

- ~~Surplus Water Available To All Lower Basin States – The surplus water released from Lake Mead should be made available to all Lower Basin states on the same formula allowed under the Law of the River: 50% to California; 46% to Arizona; and 4% to Nevada.~~

- Storage Of Water Should Be Encouraged – Off stream storage allows water agencies to make investments for future dry years. During the term interim surplus criteria are in effect, storage of surplus water should be permissible for the first two levels of surplus. Storage enhances efficient water usage by saving wet year water for dry years without harming other water users.

- Shortage Determinations – As part of the development of ~~specific surplus criteria, the effects of specific criteria on future shortage determinations must be analyzed with specific measures included in the criteria to safeguard against undue shortage risk~~interim surplus criteria, interim shortage criteria should also be developed.

DRAFT 6/23~~5~~/99

- Unused Water – Water apportioned to but unused by a state should continue to be available for use in other states under ~~specific~~interim surplus criteria.

Issues and Alternatives

The CRB believes that it is appropriate for the USBR and DOI to analyze ~~all~~ range of viable alternatives which meet the general goals outlined above in the first section of this comment letter. The process chosen to develop specific surplus criteria will need to comply with the requirements of the National Environmental Policy ~~NEPA~~ Act with the appropriate level of environmental review and documentation. Compliance with the provisions of the federal Endangered Species Act with respect to this project should be received through implementation of the Lower Colorado River Multi-Species Conservation Program.

An ongoing issue for California will be the completion of the California Plan and to what extent it must be linked to the surplus criteria. As stated in the Federal Register notice, the USBR intends to take into account California's progress, or lack thereof, on the California Plan in the development of the surplus criteria. The CRB will work closely with the USBR to ensure that the California Plan is coordinated with the development of surplus criteria. There are also issues that will need to be addressed associated with how the United States ~~meets~~will meet its obligations during ~~the period on~~ interim surplus criteria implementation period with respect to the bypass of Welton Mohawk drainage water ~~that need to be addressed.~~

Conclusion

The CRB wishes to thank the USBR and DOI for this opportunity to provide comments on the development of surplus criteria for management of the Colorado River. The CRB intends to actively participate in the development of the surplus criteria and will provide more detailed information and supplemental comments at all stages of this process. If you have any questions, please feel free to call me at (818) 543-4685.

Sincerely,

Gerald R. Zimmerman
Executive Director

cc: CRB Agencies

15.71

STATE OF CALIFORNIA - THE RESOURCES AGENCY PETE WILSON, Governor

COLORADO RIVER BOARD OF CALIFORNIA
770 FAIRMONT AVENUE, SUITE 100
GLENDALE, CA 91203-1035
(818) 543-4676
(818) 543-4685 FAX

FACSIMILE TRANSMISSION COVER SHEET

DATE: 2/26/99

TO: Jesse P. Silva

Imperial Irrigation District

FAX: 1-760-3399392

action WD

FROM: Gerald R. Zimmerman

COLORADO RIVER BOARD OF CALIFORNIA

(818) 543-4676 CAL NET 8-667-4676

8 NUMBER OF PAGES INCLUDING COVER SHEET

COMMENTS:

Hearings are beginning to be scheduled in Washington. Please review the attachments from Bob Will and provide me with your comments by tuesday afternoon.

NOTE: If you do not receive all of the pages, please call the above number
Colorado River Board of California FAX #
(818) 543-4685
(8) 667-4685 Cal Net

WILL & CARLSON, INC.
SUITE 600
1015 18TH STREET, NW
WASHINGTON, DC 20036

(202) 429.4344 PHONE
(202) 429-4342 FAX
WILLCARL@EROLS.COM

January 30, 1999

To: Gerry Zimmerman

From: Bob Will

Re: Wellton-Mohawk

The Water and Power Subcommittee of House Resources will hold a hearing on Tuesday, February 2, to consider title transfer legislation. It is primarily an oversight hearing on the general subject and policy but one or two projects such as Sly Park may come up other than Wellton-Mohawk. I will advise you of any interesting discussions.

Probably both the Senate and House committees will hold general oversight hearings on the Bureau later this spring, perhaps beginning in mid-March. The Bureau's activities will be reviewed, particularly what is being called "mission creep", the expansion of work into urban and environmental areas. There are also a lot of complaints about O & M costs being billed to project users. These will probably be our forum to raise questions about Wellton-Mohawk.

I am enclosing two documents.

1. A summary of our position on the problems at Wellton-Mohawk which I can use as a quick briefing paper for members and staff.

2. A list of questions for the committees to send to BuRec in advance of the hearings.

You will recognize most of the questions which I have tried to put in a logical format to lead a committee through the problem and elicit the future.

I would appreciate your moving through them so that there can be agreement on a document to get to the committees. I would prefer the summary of the position be limited to comment within California.

Summary of Colorado River Board Position on Wellton-Mohawk Bill

Wellton-Mohawk Irrigation and Drainage District is located along the Gila River in southwest Arizona and has about 65,000 acres of crop lands. It diverts approximately 350,000 - 400,000 acre feet of water annually from the Colorado River at Imperial Dam. Because of rising saline ground waters which hurt their crops, it started to pump the basin and discharged the drainage into the Colorado River, causing the quality of Colorado River water delivered to Mexico under the Mexican Water Treaty to become so saline that it was unusable.

Mexico and the United States agreed in 1974 that this drainage water should be channeled around the Mexican diversion points and dumped in the Gulf (It now ends up in Santa Clara Slough). The quantity of drainage water bypassed has varied but now averages just over 100,000 acre feet per year.

This affects the apportionment of water from the Colorado River for the Lower Basin States of Arizona (2.8 million af), California (4.4 million af) and Nevada (300,000 af). Lower Basin apportionment is measured by diversions from the River less return flows resulting in consumptive use, the term used in the Supreme Court decree in Arizona v. California to calculate a state's use. Return flows must be available in the River for apportionment to the States or the Mexican Treaty obligation.

Wellton-Mohawk drainage gets credit for return flows from the Bureau of Reclamation despite the fact that they are not usable by the States or Mexico so its consumptive use is lower than it should be by approximately 100,000 af. This, in effect, gives Arizona 2.9 million af of Colorado River water.

The United States solution was to build a large desalting plant so that most of the drainage could be returned to the Colorado River in a usable condition with just the reject brine stream being bypassed to the Gulf. Many question whether this plant can operate effectivaly to do this.

The Colorado River Board wants the Bureau to discontinue giving return flow credit for water not returned to the River. Also, there should be a thorough study of the plant to see if it can do its job. It has not been an issue previously as there has been adequate water to meet the needs of the States and Mexico but now the Secretary of Interior has announced that he may have to reduce California's usage of Colorado River water to 4.4 next year to meet all demands. This means there is a loss of 100,000 af of return flow (bypassed drainage water) critical to the calculation of how much river water is available for apportionment.

BACKGROUND

Please give the background of the Wellton-Mohawk Irrigation and Drainage District's saline groundwater problem, the salinity levels in its groundwater, and its impact on the District's crops. Describe the pumping program for disposal of saline groundwater within the District and give its history. Is there saline drainage from neighboring irrigation areas? Did the use of Colorado River water aggravate the problem?

IMPACT ON MEXICO

1. Please give the history of Mexico's complaints to the United States about the salinity of the waters delivered to them in the Colorado River after pumping of groundwater in Wellton-Mohawk started.

2. Please furnish the Minute items of the United States and Mexico International Boundary and Water Commission under the Mexican Water Treaty of 1944 prior to Minute 242 which dealt with the salinity problems of the Colorado River. What steps were taken to resolve them.

a. Please furnish the salinity levels of Colorado River water delivered to Mexico at the border beginning in the year prior to the pumping of saline groundwater in Wellton-Mohawk.

b. Describe the start and efforts to bypass the saline drainage flows at the border, what works were constructed and who undertook and operated the works.

c. Describe the methods used to account for the bypassed flows under the Mexican Water Treaty of 1944 and the 1964 Decree in Arizona vs. California prior to Minute 242. What quantities were involved?

MINUTE 242 AND THE COLORADO RIVER BASIN SALINITY CONTROL ACT

1. Please furnish the Committee with a copy of Minute 242.

2. Please identify the actions taken by the Bureau under Title I of the Salinity Control Act to meet the requirements of Minute 242.

3. Please describe the Yuma Desalting Plant and the Bureau's plans for its future operation and improvement. Does the Bureau intend to use it to meet the requirements of Minute 242 and the Salinity Control Act?

a. What is its current operational status and capacity?

b. If you intend to use it to meet Minute 242, what is your implementation plan. What operational capacities and schedules would be required? What is the expected life of the Plant and its current or planned technology?

c. Please furnish the costs of improvements and projected annual operation and maintenance necessary to meet this objective.

d. How will you dispose of the brine reject stream from the Plant and what are the quantities? Is there a plan to make up for the loss of water in the brine stream?

ALTERNATIVES TO THE YUMA DESALTING PLANT

1. Assuming the expiration of the "interim period" as defined in Sec. 102(a) of the Salinity Control Act, has the Bureau considered alternatives to the Yuma Desalting Plant to meet the requirements of Minute 242? Please describe them and the costs involved. Do you have a preferred alternative?

2. Would the alternatives impact Colorado River water users within the United States? Would the alternatives cause loss of Colorado River reservoir storage capacity for United States water users or compete with water transfer or conservation opportunities available to United States users or interfere with environmental mitigation programs within the United States?

COLORADO RIVER ACCOUNTING FOR BYPASSED DRAINAGE FLOWS

1. Please give the history since Minute 242 and current practice of the Bureau in accounting for return flow credit for bypassed drainage flows in calculating consumptive use of the Wellton-Mohawk Irrigation and Drainage District under the Decree

in Arizona vs. California. Include quantities diverted for consumptive use, return flow credit and bypassed flows on an annual basis since first bypassed. Identify the authority for the accounting method used.

2. Assuming the expiration of the "interim period" as defined in Sec. 102(a), how will the Bureau account for bypassed flows in the future?

15-72

United States Department of the Interior

BUREAU OF RECLAMATION
Boulder Canyon Operations Office
P.O. Box 61470
Boulder City, NV 89006-1470

IN REPLY REFER TO:
BCOO-4443
WTR 1.10 (BCP)

OCT 2 8 1998

To: Distribution List

Subject: Comments From Reopened Comment Period - Proposed Rule for Offstream Storage of Colorado River Water and Interstate Redemption of Storage Credits in the Lower Division States

The comment period for the subject proposed rule was reopened on September 21, 1998, for 30 days to request comments on three specific issues:

1. Whether an authorized entity in a Storing State must have an entitlement to Colorado River water;

2. Whether an approved Interstate Storage Agreement and a Section 5 contract should be combined into one document; and

3. If the Interstate Storage Agreement and Section 5 contract are not combined into one document, whether the documents should be processed and approved simultaneously.

The comment period closed on October 21, 1998, and we received nine comment letters. Copies of those responses are enclosed for your information. Copies of the comments originally submitted by Coachella Valley Water District and the Colorado River Board of California on April 2 and 3, respectively, that were resubmitted during the reopened comment period are not enclosed. Those copies were provided to you with the copies of the comments from the original comment period.

In addition to the comment letters, copies of the September 21, 1998, Federal Register notice that reopened the comment period and a correction dated September 30, 1998, are enclosed for your convenience.

Sincerely,

William E Rinne

William E. Rinne
Area Manager

Enclosures 10
(w/cy mailing list)

Distribution List

Ms. Rita Pearson
Arizona Department of Water Resources
500 N. Third St.
Phoenix AZ 85004-3903

Mr. Gerald Zimmerman
Colorado River Board of California
770 Fairmont Ave., Ste. 100
Glendale CA 91203-1035

Mr. James Lochhead
Colorado Water Conservation Board
1313 Sherman St., Ste. 721
Denver CO 80203

Mr. Gerald L. Edwards
Colorado River Commission of Nevada
555 E. Washington Ave., Ste. 3100
Las Vegas NV 89101

Mr. Philip Mutz
Interstate Stream Commission
State of New Mexico
P.O. Box 25102
Santa Fe NM 87504-5102

Mr. Wayne Cook
Upper Colorado River Commission
355 S. 4th East St.
Salt Lake City UT 84111

Mr. D. Larry Anderson
Utah Division of Water Resources
1636 W. North Temple, Room 310
Salt Lake City UT 84116

Mr. Gordon W. Fassett
State Engineers Office
State of Wyoming
Herschler Building 4E
Cheyenne WY 82002-0370

Corrections

Federal Register
Vol. 63, No. 189
Wednesday, September 30, 1998

This section of the FEDERAL REGISTER contains editorial corrections of previously published Presidential, Rule, Proposed Rule, and Notice documents. These corrections are prepared by the Office of the Federal Register. Agency prepared corrections are issued as signed documents and appear in the appropriate document categories elsewhere in the issue.

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 59

[AD–FRL–6149–8]

RIN 2060–AF62

National Volatile Organic Compound Emission Standards for Consumer Products

Correction

In rule document 98–22660, beginning on page 48819, in the issue of Friday, September 11, 1998, make the following corrections:

PART 59 [CORRECTED]

1. On page 48831, in the second column, the Table of Contents for Subpart C is corrected to read as set forth below.

Subpart C—National Volatile Organic Compound Emission Standards for Consumer Products

§ 59.202 [Corrected]

2. On page 48833, in the first column, in the second full paragraph, in the seventh line, before the word "products" insert the word "or".

3. On page 48833, in the second column, in the second line from the bottom, "Floggers" should read "Foggers".

§ 59.204 [Corrected]

4. On page 48835, in the third column, in § 59.204 (c)(1), in the second line, "form" should read "from".

§ 59.208 [Corrected]

5. On page 48837, in the first column, in § 59.208 (e)(1), in the first line, "(E^p)" should read "(E_a)".

6. On page 48839, in the third column, § 59.208, paragraph "(j)" should read "(j)".

BILLING CODE 1505–01–D

DEPARTMENT OF THE INTERIOR

Bureau of Reclamation

43 CFR Part 414

RIN 1006–AA40

Offstream Storage of Colorado River Water and Interstate Redemption of Storage Credits in the Lower Division States

Correction

In proposed rule document 98–25139 appearing on page 50183, in the issue of Monday, September 21, 1998, make the following corrections:

1. On page 50183, in the third column, in the second full paragraph, in the fourth line, after "result" add "from".

2. On page 50183, in the third column, in the second full paragraph, in the fourth line, "approval" should read "approved".

BILLING CODE 1505–01–D

INTERNATIONAL TRADE COMMISSION

[Investigations Nos. 701–TA–373 (Final) and 731–TA–769–775 (Final)]

Stainless Steel Wire Rod From Germany, Italy, Japan, Korea, Spain, Sweden, and Taiwan

Correction

In notice document 98–24823, appearing on page 49610, in the issue of Wednesday, September 16, 1998, make the following corrections.

1. On page 49610 in the first column, in footnote number 1, in the last line, "ech" should read "each".

2. On the same page in the second column, in footnote number 5, in the ninth line, "imminetly" should read "imminently" and "mroe" should read "more".

BILLING CODE 1505–01–D

1993, entitled "Enhancing the Intergovernmental Partnership." Under Executive Order 12875, EPA may not issue a regulation which is not required by statute unless the Federal Government provides the necessary funds to pay the direct costs incurred by the State and small governments or EPA provides to the Office of Management and Budget a description of the prior consultation and communications the agency has had with representatives of State and small governments and a statement supporting the need to issue the regulation. In addition, Executive Order 12875 requires EPA to develop an effective process permitting elected and other representatives of State and small governments "to provide meaningful and timely input in the development of regulatory proposals containing significant unfunded mandates."

The present action satisfies the requirements of Executive Order 12875 because it does not contain a significant unfunded mandate. This rule approves preexisting state requirements and does not impose new federal mandates binding on State or small governments. Under section 202 of the Unfunded Mandates Reform Act of 1995 ("Unfunded Mandates Act"), signed into law on March 22, 1995, EPA must prepare a budgetary impact statement to accompany any proposed or final rule that includes a Federal mandate that may result in estimated costs to State, local, or tribal governments in the aggregate; or to the private sector, of $100 million or more. Under section 205, EPA must select the most cost-effective and least burdensome alternative that achieves the objectives of the rule and is consistent with statutory requirements. Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly or uniquely impacted by the rule.

EPA has determined that the approval action proposed does not include a Federal mandate that may result in estimated costs of $100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. This Federal action approves pre-existing requirements under State or local law, and imposes no new requirements. Accordingly, no additional costs to State, local, or tribal governments, or to the private sector, result from this action.

Nothing in this action should be construed as permitting or allowing or establishing a precedent for any future request for revision to any State Implementation Plan. Each request for revision to the State Implementation Plan shall be considered separately in light of specific technical, economic, and environmental factors and in relation to relevant statutory and regulatory requirements.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Hydrocarbons, Ozone, Reporting and recordkeeping requirements.

Authority: 42 U.S.C. 7401 *et seq.*

Dated: September 11, 1998.

John P. DeVillars,

Regional Administrator, Region I

[FR Doc. 98-25195 Filed 9-18-98; 8:45 am]

BILLING CODE 6560-50-P

DEPARTMENT OF THE INTERIOR

Bureau of Reclamation

43 CFR Part 414

RIN 1006-AA40

Offstream Storage of Colorado River Water and Interstate Redemption of Storage Credits in the Lower Division States

AGENCY: Bureau of Reclamation, Interior.

ACTION: Proposed rule; reopening of comment period.

SUMMARY: The Department of the Interior ("the Department" or "we") hereby gives notice that we are reopening the comment period on our proposed rule entitled "Offstream Storage of Colorado River Water and Interstate Redemption of Storage Credits in the Lower Division States." We originally published the proposed rule on December 31, 1997, at 62 FR 68492, and accepted public comments until April 3, 1998.

DATES: We must receive your comments at the address below on or before October 21, 1998.

ADDRESSES: If you wish to submit comments, you may do so by any one of three methods. You may mail comments to Bureau of Reclamation, Administrative Record, Lower Colorado Regional Office, P.O. Box 61470, Boulder City, NV 89006-1470. You may comment via the internet at bjohnson@lc.usbr.gov Or, you may hand-deliver comments to Bureau of Reclamation, Administrative Record, Lower Colorado Regional Office, 400 Railroad Avenue, Boulder City, NV.

FOR FURTHER INFORMATION CONTACT: Mr. Dale Ensminger, (702) 293-8659.

SUPPLEMENTARY INFORMATION: We request that interested parties provide comments on whether an authorized entity in a Storing State under the rule must hold an "entitlement" to use Colorado River water pursuant to court decree, contract with the United States, or reservation of water from the Secretary of the Interior. As published on December 31, 1997, section 414.2 of the proposed rule defined "authorized entity" as "a State water banking authority, or other entity of a Lower Division State holding entitlements to Colorado River water. * * *" Section 414.2 of the proposed rule defined "Entitlement" as "an authorization to benefically use Colorado River water pursuant to: (1) a decreed right, (2) a contract with the United States through the Secretary, or (3) a reservation of water from the Secretary."

The Department received differing comments on these definitions and other technical matters during the previous comment period. For example, differing comments on the definition of "authorized entity" revealed that some read the definition as allowing a State Water Bank to participate in activities under the rule without holding an entitlement to Colorado River water, while others did not. We invite comment on whether the definition of "authorized entity" should be revised to clarify that an "authorized entity," including a State water bank, must hold an entitlement to Colorado River water in order to ensure consistency with the Law of the River, including specifically section 5 of the Boulder Canyon Project Act, 43 U.S.C. 617d, as interpreted by the *Supreme Court in Arizona* v. *California*, 373 U.S. 546 (1963).

We also invite comment on whether efficiency, flexibility, and certainty in Colorado River management may result combining an approval Interstate Storage Agreement and a contract under Section 5 of the Boulder Canyon Project Act into one document, thus making the parties entitlement holders upon execution of the Agreement. And, we invite comment on whether, if the documents are not combined, the Interstate Storage Agreements and any separate Section 5 contract (or amendments to an existing contract) should be processed and approved simultaneously to eliminate duplication of any administrative and compliance procedures.

Dated: September 15, 1998.

Patricia J. Beneke,

Assistant Secretary—Water and Science.

[FR Doc. 98-25139 Filed 9-18-98; 8:45 am]

BILLING CODE 4310-94-M

ARIZONA DEPARTMENT OF WATER RESOURCES
500 North Third Street, Phoenix, Arizona 85004
Telephone (602) 417-2410
Fax (602) 417-2415

October 20, 1998

JANE DEE HULL
Governor

RITA P. PEARSON
Director

Bureau of Reclamation
Administrative Record
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

RE: Arizona Water Banking Authority Comments on the Definition of "Authorized Entity; 43 CFR Part 414

Dear Sir:

On September 21, 1998, the Bureau of Reclamation (Bureau) published notice of the reopening of the comment period on the proposed rule, 43 CFR Part 414. The notice solicited comments on the definition of "Authorized Entity" in that proposed rule. You have specifically requested comment on whether the definition should be "clarified" to specify that an Authorized Entity, including a state water bank, must hold an entitlement to Colorado River water. You have also requested comment on whether an entitlement for interstate banking purposes could be based on an Interstate Storage Agreement entered into pursuant to the proposed rule. The Arizona Water Banking Authority (AWBA) hereby submits the following comments on these issues.

As always, Arizona advocates maintaining the integrity of the existing Law of the River. Therefore, the AWBA does not disagree with the proposition that all diversions of Colorado River water from the mainstream must be pursuant to an entitlement. The AWBA, however, disagrees with the Bureau's proposal to specify that a state water bank must hold an entitlement in order to qualify as an Authorized Entity for banking purposes. The AWBA believes that such a requirement is unnecessary, improperly describes the role of the Authorized Entity in the Storing State and will unnecessarily restrict interstate banking.

From Arizona's perspective, the crucial role of the Authorized Entity in the Storing State is to facilitate the "recovery" of banked water by the Consuming State. Although any entity with legally available Colorado River water may store water, there is no entity in Arizona, other than the AWBA, that can legally make water available to the Consuming State.

It is Arizona's position that, under its 1944 Contract with the Secretary of the Interior (Secretary) and the *Arizona v. California* Decree, the state itself holds the right to the diversion and use within Arizona of 2.8 maf per year of Colorado River water. No individual entitlement holder within Arizona has the right to waive any part of the state's rights under the 1944 Contract and the Decree. An individual entitlement holder might agree to waive its right to divert its entitlement, but the state would not have waived its right to have its full 2.8 maf apportionment

delivered to other entitlement holders within the state. Therefore, there would be no unused apportionment to be delivered to a Consuming State when that state attempted to recover water previously banked. The AWBA is the only entity authorized by the Arizona legislature to waive temporarily, for the purposes of interstate banking, the state's right to its full 2.8 maf apportionment. *See* A.R.S. § 45-2471(D).

Therefore, the Bureau's emphasis on the Authorized Entity in the Storing State needing its own entitlement is misplaced and inappropriately shifts the focus of the Authorized Entity's role from the "recovery" phase of interstate banking to the "storage" phase. Further, to the extent that the Bureau believes there is an existing legal requirement that a state banking entity hold its own entitlement in order to fulfill its responsibilities, the Bureau's concern is unwarranted.

Not all end users of Colorado River water are required by the Secretary to hold entitlements or contracts directly with the Secretary. The Metropolitan Water District of Southern California delivers water to numerous cities in California which do not have direct contractual relationships with the Secretary. In addition, the Colorado River Basin Project Act, which authorized and governs the Central Arizona Project (CAP) from which the AWBA obtains water for storage, provides that direct contractual relations between the Secretary and end-users of CAP water is discretionary:

> Irrigation and municipal and industrial water supply under the Central Arizona Project within the State of Arizona may, in the event the Secretary determines that it is necessary to effect repayment, be pursuant to master contracts with organizations which have power to levy assessments against all taxable real property within their boundaries. The terms and conditions of contracts or other arrangements whereby each such organization makes water available from the Central Arizona Project available to users within its boundaries shall be subject to the Secretary's approval, and the United States shall, **if the Secretary determines such action is desirable to facilitate carrying out the provisions of this chapter**, have the right to require that it be a party to such contracts or that contracts subsidiary to the master contracts be entered into between the United States and any user.

43 U.S.C. § 1524(b) (emphasis added). Therefore, under this provision, there is no requirement that the AWBA have a direct contractual relationship with the Secretary in order to fulfill its responsibilities to store unused Arizona apportionment.

The AWBA has entered into an agreement with the Central Arizona Water Conservation District (CAWCD) that allows the AWBA to take water for banking purposes that would otherwise be unused in Arizona. This agreement is consistent with the existing legal framework for the Colorado River and the CAP. Therefore, the AWBA can fulfill its responsibilities without holding its own entitlement.

The AWBA does not currently have the express authority to obtain an entitlement for Colorado River water; further, it is questionable whether such authority could be obtained. The AWBA statutes clearly provide that the AWBA is to store only water that would otherwise be unused in Arizona. *See* A.R.S. § 45-2401(F)(1). The AWBA's role as a storer of water is intended to be temporary and to diminish over time as more of Arizona's apportionment is put to direct use by water users in Arizona. This role is appropriately served by its current agreement with CAWCD.

The character of the AWBA would be significantly changed if it held its own permanent entitlement to Colorado River water with its own priority position within the state's apportionment. It is questionable whether a consensus could be built in Arizona to alter the AWBA's role from a storer of otherwise unused water to a competitor with the legal right to deprive lower priority entitlement holders of their Colorado River water. Therefore, continued insistence by the Bureau that an Authorized Entity in a Storing State hold its own entitlement might prevent the AWBA, the only entity in Arizona with the legal authority to allow "recovery" of banked water by a Consuming State, from participating in interstate banking agreements.

Because there is no need for an Authorized Entity in a Storing State to hold its own entitlement, there is no need for a provision in the proposed rule which allows the Interstate Storage Agreement to serve as the basis for that entitlement. The AWBA is currently legally authorized to obtain Colorado River water that would otherwise be unused in Arizona for all of its banking purposes, both in-state and interstate. No further legal authority is needed.

Because it is unnecessary, overly-restrictive and inappropriately describes the role of the Storing State Authorized Entity, the Bureau should not include a requirement in the proposed rule that an Authorized Entity in a Storing State hold its own entitlement to Colorado River water. The AWBA re-endorses the proposed language for the definition of "Authorized Entity" submitted to the Bureau on April 1, 1998, during the initial comment period.

Thank you for your consideration of these comments.

Sincerely,

Rita P. Pearson

Rita P. Pearson, Chairperson
Arizona Water Banking Authority

cc: Tom Griffin, Vice Chair, AWBA
Bill Chase, Secretary, AWBA
Dick Walden
Grady Gammage, Jr.

RPP:clc:kd

CENTRAL ARIZONA PROJECT

P.O. Box 43020 • Phoenix, Arizona 85080-3020 • 23636 North ~~Seventh Street (85024)~~
(602) 869-2333 • www.cap-az.com

October 21, 1998

Bureau of Reclamation, Administrative Record
Lower Colorado Regional Office
Attn: Dale Ensminger
P.O. Box 61470
Boulder City, NV 89006-1470

Subject: **Offstream Storage of Colorado River Water and Interstate Redemption of Storage Credits in the Lower Division States**

Dear Mr. Ensminger:

The Central Arizona Water Conservation District (CAWCD) has participated in the discussions leading to comments submitted by the Arizona Department of Water Resources and the Arizona Water Banking Authority (AWBA). We fully endorse those comments. We offer additional comments to emphasize certain issues and concerns.

Reclamation has invited additional comment on whether the proposed rule should be revised to clarify that an "authorized entity," including a state water bank, must hold an "entitlement" to Colorado River water before it can enter into an interstate storage agreement. The reason cited by Reclamation for including such a requirement is "to ensure consistency with the Law of the River, including specifically section 5 of the Boulder Canyon Project Act, 43 U.S.C. 617d." CAWCD submits that the proposed clarification is both unnecessary and inappropriate. The role of the authorized entity is to arrange for storage and insure the availability of unused apportionment in the future. The entity may do so through contractual arrangements with any number of entitlement holders. There is no specific need for the authorized entity to be an entitlement holder in its own right.

In the specific case of the AWBA, the AWBA receives Colorado River water for storage pursuant to a contract with CAWCD. The water CAWCD makes available to AWBA is Central Arizona Project (CAP) water that is available for delivery in any calendar year after all other requests for CAP water have been satisfied. CAWCD provides this "excess water" to AWBA pursuant to Article 8.7(e) of the Contract Between the United States and CAWCD for Delivery of Water and Repayment of Costs of the Central Arizona Project, dated December 1, 1988 (Contract No. 14-06-W-245, Amendment No. 1). Because AWBA's contract for delivery of CAP water is tied to and authorized under CAWCD's contract with

the United States, the requirements of section 5 of the Boulder Canyon Project Act are satisfied. Thus, it is unnecessary to require that the AWBA as the "authorized entity" have a contract directly with the United States for delivery of Colorado River water.

The best course of action is for Reclamation not to include in the definition of "authorized entity" any requirement for holding an "entitlement." This change was suggested by AWBA in its initial comments on the proposed rule. Alternatively, Reclamation could revise the definition of "entitlement" specifically to include the contractual arrangement that AWBA has with CAWCD. As a final option, Reclamation could conclude that AWBA's contract with CAWCD satisfies the definition of "entitlement" as currently drafted–i.e., that AWBA, through its contract with CAWCD, has "an authorization to beneficially use Colorado River water pursuant to . . . a contract with the United States through the Secretary." If Reclamation chooses this last alternative, however, it must clearly state in the preamble to the final rule that the AWBA contractual arrangement constitutes an "entitlement" as that term is defined in the regulations.

Thank you for the opportunity to provide these additional comments.

Sincerely,

David S. "Sid" Wilson, Jr.
General Manager

lo
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facsimile
TRANSMITTAL

to: Dale Ensminger, Bureau of Reclamation

fax #: (702) 293-8042

re: **Comments Concerning Proposed 43 CFR Part 414 Offstream Storage Rule**

date: October 21, 1998

pages: 5, including this cover sheet.

Sent to you in accordance with the Federal Register Notice of September 21, 1998 (63 Fed. Reg. 50181). Per our conversation this date, facsimile submittal is acceptable.

Please note that the original letter will follow in the mail.

If all pages are not received, please contact Lori Grossman at 258-3107.

From the desk of...

Lori D. Grossman
Executive Assistant to the Deputy General Manager,
Engineering/Operations
Las Vegas Valley Water District
1001 S. Valley View Blvd.
Las Vegas, Nevada 89107

(702) 258-3107
Fax: (702) 258-3268

COLORADO RIVER COMMISSION
OF NEVADA

October 21, 1998

Mr. Robert Johnson, Regional Director
Administrative Record
Lower Colorado Regional Office
Bureau of Reclamation
Box 61470
Boulder City, NV 89006-1470

RE: Comment of the Colorado River Commission of Nevada and the Southern Nevada Water Authority Concerning Proposed 43 CFR Part 414 Offstream Storage Rule

Dear Mr. Johnson:

The Colorado River Commission of Nevada ("Commission") and the Southern Nevada Water Authority ("SNWA") jointly submit these comments in response to the Bureau's notice of September 21, 1998 (63 Fed. Reg. 50181).

The Commission and the SNWA continue to support, and urge the Interior Department to rapidly conclude, adoption of a final rule for offstream storage of Colorado River water in the Lower Basin. We now project that Nevada will fully utilize its 300,000 afy apportionment by 2006, and storage of currently unused Colorado River water in central Arizona for Nevada's future use is a key component of our water resource plan for the period 2006 to 2030. To this end, we are prepared to begin negotiations with Arizona officials at any time. As you know, however, Arizona law requires that the Director of Water Resources find that Interior's offstream storage rule adequately protects Arizona's rights to Colorado River water before the Arizona Water Banking Authority may begin negotiation of an interstate offstream banking transaction. Consequently, it is of critical importance to Nevada that – just as soon as possible -- the Interior Department publish a final rule that contains provisions that will accommodate an Arizona/Nevada transaction.

Our April 3 comments on the proposed rule recommended a split definition of "Authorized Entity" that deleted the proposed rule's requirement that the Authorized Entity be an "entitlement holder." While our comments did not discuss this issue, implicit in our recommendation was our view that an Authorized Entity legally need not be -- and as a policy matter should not be required to be -- an entitlement holder.

#730864.1

555 E. Washington Avenue, Suite 3100, Las Vegas, Nevada 89101-1048
Phone: (702) 486-2670
Fax: (702) 486-2695
TDD (702) 486-2698

Section 5 of the Boulder Canyon Project Act (BCPA) provides that "no person shall have or be entitled to have the use for any purpose of [Colorado River] water except by contract" with the Secretary, and article III(C) of the decree in *Arizona v. California* (Decree) enjoins state entities from diversion of water "which has not been authorized by the United States for its particular use." Interior's contracting practice makes clear that these provisions require only that the actual diverter of water from the River be an entitlement holder, although, of course, the subsequent use of the water must be in conformity with the water delivery contract.

For example, the Secretary has section 5 water delivery contracts with the Metropolitan Water District of Southern California (Metropolitan) and the SNWA, both of which are wholesalers of water. The retail agencies that are members of Metropolitan and SNWA do not have contracts with the Secretary and, indeed, do not even have contracts with the wholesale agency of which they are a member. Their water deliveries, and the subsequent use of water by the end-user, of course, must conform to all requirements of the Secretary's respective contracts with Metropolitan and SNWA.

The contractual arrangements governing Colorado River deliveries to the California coastal plain and to southern Nevada have served well, and the interests of the United States have been fully protected, despite the lack of any contractual relationship between the retail agency (or the end user) and the Secretary. We believe there is no reason – policy or legal – for the Interior Department to require more in its final offstream storage rule.

Our understanding of the way an actual offstream storage transaction would be structured between the Arizona and Nevada interests leads us to two conclusions. First, the interests of all concerned, including the Department of the Interior, can be fully protected without the Arizona Water Banking Authority (AWBA) itself being an entitlement holder, as long as enforceable commitments by entitlement holders exist to divert water for storage and, subsequently, to intentionally create unused apportionment. (Indeed, the entitlement holder diverting water to storage may well not be the same entitlement holder that eventually will refrain from exercising its full entitlement to create intentionally create unused apportionment.)

Second, although Arizona law assigns such central and pivotal functions to the AWBA that it must be the "Authorized Entity" under the offstream storage rule, those functions are such that it would actually be inappropriate for the AWBA to hold an entitlement to Colorado River water.

For example, when the source of water to be stored will be Arizona's unused basic apportionment, the transaction will call for the identification and contractual recruitment of an entitlement holder in Arizona whose section 5 contract will be the vehicle for diverting,

wheeling, and directing water into direct or in-lieu groundwater storage. Under Arizona law, storage credits for the stored water will be held by the AWBA, but the AWBA will not be the actual entity that diverts, conveys, or stores the water. Likewise, when the storage credits are to be redeemed and the stored water used in central Arizona, there will be the identification and contractual recruitment of an entitlement holder (i.e., a section 5 contract holder) in Arizona who ultimately will intentionally create unused apportionment.

In our view, then, the law requires a section 5 contract only for those entities engaged in diversion of Colorado River water , and we submit that sound public policy requires no more.

We understand, however, that in litigation respecting the Central Arizona Project the Interior Department has been taking the position that the storage phase of such a transaction, during which time the AWBA will be an administrative beneficiary of groundwater storage credits under Arizona law, requires Secretarial approval and that such approval cannot be found in the Central Arizona Water Conservancy District's ("CAWCD") existing section 5 master repayment and water delivery contract (as amended in 1988). We understand that the Arizona Department of Water Resources ("ADWR"), AWBA, and the CAWCD, on the other hand, find adequate existing authority in that CAWCD master repayment contract for an arrangement between the District and the Bank covering the storage of water underground.

We do not wish to intrude into this litigation, but we observe that the issue in contention appears to be one of contract interpretation, not statutory compulsion. As with the BCPA, the Colorado River Basin Project Act does not *require* any Secretarial contract other than the BCPA section 5 authorizing diversion of water from the River (whether the Secretary approves or is a party to subcontracts with those taking water from a diverter such as CAWCD is discretionary with the Secretary). We strongly urge that the regulations reflect only those statutory or injunctive requirements that apply to the Lower Colorado River generally and that matters involving a particular section 5 contract which might be employed in a specific transaction be left to the Department's consideration of that transaction.

In this connection, we urge that the Department not allow these precedent setting regulations – and the Arizona/Nevada transaction which they will facilitate – to become embroiled in the continuing dispute between the Department and CAWCD over operation and funding of the Central Arizona Project. That is a discrete and separate dispute, and it should remain so.

The second, and related, issue on which the September 21 notice invites comment is the advisability of combining any separate section 5 contract (new or amended) and the Interstate Storage Agreement ("ISA") into a single document. We view the ISA primarily as documenting

a business transaction between non-federal parties that can be approved by the Secretary of the Interior. We continue to envision an additional separate contractual commitment from the Secretary for the release of water in Lake Mead to the SNWA, based on the occurrence of intentionally created unused apportionment in Arizona. (See our April 3 comments at pages 2-4.) Such a contract could be executed concurrently with the ISA. We do not foresee a need for new and additional section 5 contracts beyond those that now exist. In general, however, we support efforts to make the environmental reporting, approval, and implementation processes as timely and efficient as practicable.

Finally, we note with concern that the phrase "interstate Redemption of Storage Credits" is used in the title of the September 21 Federal Register notice. We continue to endorse Arizona's earlier suggestion that a term other than "storage credits", adopted first by the Arizona banking legislation, be used in the final rule to avoid confusion.

Thank you for this opportunity to comment further on the proposed offstream storage rule. We urge the Department to publish the rule expeditiously.

COLORADO RIVER COMMISSION OF NEVADA

By: _____
Richard Bunker, Chairman

SOUTHERN NEVADA WATER AUTHORITY

By: _____
Patricia Mulroy, General Manager

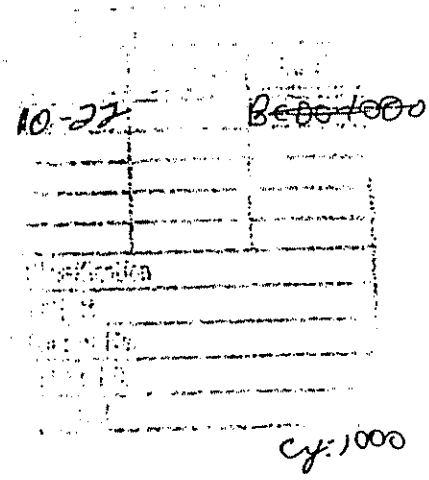
#236864.1

STATE OF CALIFORNIA - THE RESOURCES AGENCY

PETE WILSON, Governor

COLORADO RIVER BOARD OF CALIFORNIA
770 FAIRMONT AVENUE, SUITE 100
GLENDALE, CA 91203-1035
(818) 543-4676
(818) 543-4685 FAX

October 16,1998



Mr. Robert W. Johnson
Regional Director
U.S. Bureau of Reclamation
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, Nevada 89006-1470

RE: Administrative Record for the Proposed Offstream Storage Rule

Dear Mr. Johnson:

The Colorado River Board of California appreciates the opportunity to respond to the questions that were raised in the U.S. Bureau of Reclamation's (Reclamation's) Federal Register notice of September 21, 1998, regarding "Offstream Storage of Colorado River Water and Interstate Redemption of Storage Credits in the Lower Division States" (Proposed Rule), 43 CFR Part 414. The September 21st Federal Register notice was published as a "proposed rule - reopening of comment period."

On April 3, 1998, the Colorado River Board provided comments on the Proposed Rule that was published in the Federal Register on December 31,1997. The Colorado River Board reiterates, herewith, the comments that were contained in that letter. A copy of the Board's comments are enclosed for your reference.

Your September 21, 1998, Federal Register notice raised the following three specific questions:

1) Must an authorized entity in the storing state have a water service contract under the Boulder Canyon Project Act?

2) Should the approval of the interstate storage agreement and a Section 5 contract under the Boulder Canyon Project Act be combined into one document?

3) If the approval of the storage agreement and the contract are not combined into one document, should the documents be processed and approved simultaneously?

In response to these questions the Colorado River Board has the following comments.

An authorized entity in the storing state must have a water service contract under the Boulder Canyon Project Act. Both the Boulder Canyon Project Act and the 1964 U.S. Supreme Court Decree in Arizona v. California require such a contract with the Secretary of the Interior. Section 5 of the Boulder Canyon Project Act requires that "No person shall have or be entitled to have the use for any purpose of the water stored as aforesaid except by contract made as herein stated." This requirement is further contained in the 1964 U.S. Supreme Court Decree in Arizona v. California, which states in Article II(B)(5) that "... mainstream water shall be released or delivered to water users (including but not limited to, public, and municipal corporations and other public agencies) in Arizona, California, and Nevada only pursuant to valid contracts therefor made with such users by the Secretary of the Interior, pursuant to Section 5 of the Boulder Canyon Project Act or any other applicable federal statute." This requirement applies to an authorized entity in the storing state just as it does to any other entity or individual.

Regarding the question of whether the storage agreement and the contract pursuant to Section 5 of the Boulder Canyon Project Act should be included in the same document, it is the Colorado River Board's position that it does not matter provided that both documents are processed and approved at the same time. It makes sense to combine these documents into a single document; however, it is not necessary to have that as a requirement.

As previously indicated, regarding the question concerning whether the storage agreement and the contract pursuant to Section 5 of the Boulder Canyon Project Act should be processed and approved simultaneously, it is the Colorado River Board's position that this must be a requirement. For the storage agreement and the contact to be appropriately and adequately processed, reviewed, and approved there must be a concurrent processing and review whether they are separate documents or combined into a single document.

Thank you for providing the Colorado River Board of California another opportunity to comment on the Proposed Rule.

Sincerely,

Gerald R. Zimmerman
Executive Director

Enclosure

ESTABLISHED IN 1918 AS A PUBLIC AGENCY

COACHELLA VALLEY WATER DISTRICT

POST OFFICE BOX 1058 • COACHELLA, CALIFORNIA 92236 • TELEPHONE (760) 398-2651

October 19, 1998

File: 0644.61

Bureau of Reclamation
Administrative Record
Lower Colorado Regional Office
Post Office Box 61470
Boulder City, Nevada 89006

Gentlemen:

Subject: Additional Comments of Coachella Valley Water District on Proposed Rule for Offstream Storage of Colorado River Water and Interstate Redemption of Storage Credits in the Lower Division States (Reopened Comment Period)

We appreciate the opportunity to provide additional comments on the rule and questions posed in the September 21 Federal Register.

Enclosed are our comments. We are also enclosing our comments dated April 2 and ask that they be included in the record.

If you have any questions, please call me at extension 201.

Yours very truly,

Tom Levy
General Manager-Chief Engineer

Enclosures/2/as

cc: Gerald Zimmerman (with enclosures)
Colorado River Board
770 Fairmont Avenue, Suite 100
Glendale, California 91203

TEL:il\ltrs\oct\bureau

SUPPLEMENTAL COMMENTS OF COACHELLA VALLEY WATER DISTRICT ON PROPOSED RULE FOR OFFSTREAM STORAGE OF COLORADO RIVER WATER AND INTERSTATE REDEMPTION OF STORAGE CREDITS IN THE LOWER DIVISION STATES

During the original comment period, Coachella Valley Water District submitted detailed comments on the proposed rule for Offstream Storage of Colorado River Water and Interstate Redemption of Storage Credits in the Lower Division States. Coachella Valley Water District reaffirms its prior comments and submits these supplemental comments in response to the notice published Monday, September 21, 1998, in 63 FR 50183 requesting supplemental comments on the issues listed below.

1. Must an authorized entity in the storing state have a water service contract under the Boulder Canyon Project Act?

Yes. Section 5 of the Boulder Canyon Project Act (43 U.S.C. § 617d) requires a contract for any entity that is involved in the delivery and use of Colorado River water. Section 5 authorizes the Secretary "Under such general regulations as he may prescribe, to contract for the storage of water in said reservoir and for the delivery thereof at such points on the river . . . as may be agreed upon, for irrigation and domestic uses . . . ." (Emphasis added.) Section 5 also

declares: "No person shall have or be entitled to have the use for any purpose of the water stored as aforesaid except by contract made as herein stated." (Emphasis added.) The Supreme Court's decision in Arizona v. California emphasized the importance of this contracting power as part of the congressional scheme to regulate the river and specifically held that subcontractors of a state contract must have contracts with the Secretary. (373 U.S. 546, 579-592.) This contract requirement is enforced in Article II(B)(5) of the Decree which provides that "Mainstream water shall be released or delivered to water users (including but not limited to public and municipal corporations and other public agencies) in Arizona, California, and Nevada only pursuant to valid contracts therefor made with such users by the Secretary of the Interior, pursuant to Section 5 of the Boulder Canyon Project Act . . ." (376 U.S. 340, 343.)

The activities of an authorized entity in a storing state fall within the scope of activities covered by the Section 5 contract requirement since an authorized entity is directly involved in the "delivery" and "use" of Colorado River water.

In order to carry out its responsibilities under the kind of Interstate Storage Agreement envisioned by the proposed rule, the authorized entity in the storing state must cause Colorado River water to be diverted in order to be stored and

used as the basis for creating intentionally unused apportionment in the future. Although such a transaction is complex, it is clear that the storing state's authorized entity is integrally involved in a scheme involving the "delivery" and "use" of Colorado River water. Even in its narrowest context, Colorado River water is being "delivered" and diverted to a storage site. It is also clear that the water is being "used" whether one regards the use as the actual storage in a groundwater basin or the use of stored water at a future date to create unused apportionment.

2. Should the approval of the Interstate Storage Agreement in a Section 5 contract under the Boulder Canyon Project Act become combined into one document?

There is no legal requirement that a Section 5 contract and the approval of an Interstate Storage Agreement be combined into one document. The matter is left to the convenience of the parties and the Secretary. Combining the two into one document would have the effect of making the Secretary a party to the Interstate Storage Agreement, which may have the effect of giving state entities greater security that future obligations under the Interstate Storage Agreement would be performed.

3. If the approval of the Storage Agreement and the contract are not combined into one document, should the documents be processed and approved simultaneously?

Yes. Since a Section 5 contract with an authorized entity of a storing state is solely for the purpose of effecting the Interstate Storage Agreement, prudence would suggest that the contract and the Storage Agreement be processed and approved simultaneously so that all aspects of the proposed transaction can be reviewed in one proceeding.

COMMENTS OF COACHELLA VALLEY WATER DISTRICT

ON PROPOSED RULE FOR OFFSTREAM STORAGE OF COLORADO

RIVER WATER AND INTERSTATE REDEMPTION OF STORAGE

CREDITS IN THE LOWER DIVISION STATES

1. The proposed rule should be narrowed in scope to apply only to offstream interstate storage undertaken by the Arizona Water Banking Authority.

The Bureau has acknowledged that the impetus behind and the purpose of the proposed rule is to facilitate the implementation of offstream interstate storage by the Arizona Water Banking Authority under the relevant provisions of Arizona statutes. Coachella Valley Water District views offstream interstate storage by AWBA as a positive step toward improved management of Colorado River resources in the Lower Colorado River Region and does not desire to stand in the way of a measure that it views as part of a larger series of steps that need to be taken to arrive at a regional solution, including development and implementation of the California 4.4 Plan. Indeed, the draft California 4.4 Plan considers offstream interstate storage in AWBA as one mechanism for California to reduce its annual consumptive use of Colorado River water from present levels.

Coachella is very concerned, however, that the proposed rule intends to regulate a far broader range of offstream interstate storage activities than those proposed by AWBA, and that in sweeping so broadly, the rule does so in a manner that may impact the development of offstream interstate storage in California and impair the existing water rights of California contractors, including Coachella Valley Water District. The concerns of Coachella can in large measure be alleviated by modifying the proposed rule to narrow its focus to offstream interstate storage activities conducted by state entities in Arizona thereby leaving other offstream interstate storage activities to be governed either by ad hoc secretarial approval of specific arrangements or by promulgation of separate rules at a later date if that should become necessary or desirable.

As the Bureau is well aware, different administrative regimes have been established in each of the three Lower Basin States for the allocation and management of each state's apportionment of Colorado River water. In California, this is accomplished by a completely decentralized management system, which is governed exclusively by the provisions of the Secretary's contracts with the individual contracting entities. The State of California itself is not a party to any of those contracts and does not hold a contract with the Secretary for any Colorado River entitlement. The other states have adopted

different regimes which include more centralized contracting and management systems. The management regimes that emerged were the result of internal arrangements made within each state, which the decision makers in each state, in their judgment, considered best suited to serve the needs of the state. Coachella respects the decisions that have been made in other states to adopt more centralized management regimes for administering Colorado River rights, and suggests that in the interests of comity, the other states ought to respect the arrangements that Californians chose to make for themselves. Coachella is very concerned that the State of Arizona through its statutes regulating AWBA is attempting to impose its views of a proper management regime on the other states and cautions the Bureau that the proposed rule should not be used as a device to accomplish that purpose.

Coachella believes that it is premature to promulgate a rule governing offstream interstate storage in California until the California contractors have agreed upon the California 4.4 Plan. Under the process established by David Kennedy, Director of California Department of Water Resources, the California Agencies are working diligently toward development of a California 4.4 Plan to reduce California's current annual consumptive use of Colorado River water. The draft California 4.4 Plan has identified a number of programs and activities that can lead to that result. However, it should be recognized that all elements

of the draft California 4.4 Plan form part of an interlocking whole, and that each proposed modification of existing arrangements is conditioned upon agreement of each agency to all of the proposed modifications and that one may not come before another. Until the California 4.4 Plan is finalized, one cannot be certain what new arrangements may come into being and how those arrangements may or may not comport with the regulatory scheme in the proposed rule. Additionally, until the California 4.4 Plan is finalized, none of the California Agencies can take the risk of allowing itself to be placed in a disadvantageous position and they are therefore compelled to take action to protect their respective rights to Colorado River water. Focusing the rule exclusively on offstream interstate storage by AWBA will remove challenges that may otherwise arise from the necessity of each California Agency to protect its rights.

There are additional strong and compelling reasons for narrowing the focus of the rules.

First, narrowing the rule will significantly reduce possible challenges regarding NEPA compliance in the promulgation of the rule. At the Public Workshop held March 27, 1998, a number of the speakers raised concerns about potential environmental effects of offstream storage that may be undertaken in California. However, the draft environmental assessment makes no mention of offstream interstate storage in California, nor does

it consider or discuss any environmental effects that may arise from such storage. The same is true of offstream storage in Nevada. The environmental assessment has confined itself to an examination of environmental effects from offstream interstate storage in Arizona and narrowing the rule will eliminate a challenge regarding the failure of the environmental assessment to discuss offstream storage activities in other states.

Second, the Bureau candidly recognizes that it cannot promulgate an all-encompassing rule governing all offstream interstate storage activities. While the prefatory material mentions the Bureau's desire that arrangements be made to permit Indian Tribes to participate in such activities, it also acknowledges that the rule is not intended to govern those arrangements. This is a prudent recognition of the limitations and restrictions that federal law imposes regarding Indian water rights. Federal law currently prohibits Indian Tribes from contracting with others regarding their water rights, except in connection with the leasing of tribal trust lands, and then only with the consent of the Secretary. (25 U.S.C. §§ 177 and 415.) Absent authorizing legislation from Congress, the Tribes cannot legally enter into the kind of interstate storage agreements contemplated by the proposed rule. Additionally, the proposed rule's requirement that a participating entity must be authorized by state law to enter into an interstate storage agreement

directly conflicts with the provisions of Public Law 280 which preempts state jurisdiction over Indian water rights. (28 U.S.C. § 1360(b).) There also exists legal uncertainty as to whether Indian reserved water rights can be used off reservation; there are no statutes or case law resolving the issue.

Third, as presently framed, the proposed rule would appear to preclude California from being a storing state. The proposed definition of "authorized entity" in Section 414.2 requires that the entity be "expressly authorized pursuant to applicable laws of Lower Division States" to engage in one of the enumerated activities. This definition, which appears intended to cover AWBA, could very well exclude all California Agencies from participating in interstate storage agreements since it is not clear whether the powers conferred upon them by their respective governing acts would satisfy the proposed rule's requirement of express authorization. At the Bureau Workshop, it was acknowledged that the Bureau has not examined whether entities outside of Arizona would satisfy the definition's requirements. Until a finalized California 4.4 Plan is adopted, many California Agencies are reluctant to ask the California Legislature for specific legislative authority due to the excited political climate regarding water issues in the Legislature. Adoption of a final California 4.4 Plan could very well establish alternative mechanisms to facilitate offstream interstate storage in

California without the need to establish new state governmental agencies or to amend the governing acts of the California Agencies, thereby making action by the California Legislature unnecessary. These opportunities should not be needlessly foreclosed.

2. The proposed rule does not contain adequate provisions to protect the rights of existing entitlement holders.

There are several aspects of the proposed rule that raise serious concerns for Coachella as to the protection afforded to the rights of existing entitlement holders.

First, Section 414.3(b), which sets forth the criteria that will govern the Secretary's approval of an interstate storage agreement, states that the Secretary will "consider" among numerous factors, "potential effects on water rights holders, including contractors, ...; potential effects on third parties; ... comments from interested parties, particularly parties who may be affected by the proposed action; ...." The use of the word "consider" suggests that the Secretary would be free to disregard the rights of existing contractors when approving an interstate storage agreement. This is a matter of very grave concern to Coachella which has directly contracted with the Secretary for deliver of Colorado River water and also has surplus water contracts with the Secretary. The proposed rule

should be revised to positively state that the Secretary will not give approval to an interstate storage agreement that alters or impairs the rights of existing entitlement holders without first obtaining the consent of the affected entitlement holder.

A second area of concern to Coachella is the reference in Section 414.3(a) to storage of unused entitlement. This language should be deleted. When the language is combined with the uncertain definition of authorized entity in Section 414.2, Section 414.3(a) could be read as permitting one California entitlement holder to store water in California for the ultimate benefit of an entity in another state, without regard to the rights of junior right holders in California. Under the priority system of the Seven Party Agreement that has been incorporated into each of the Secretary's contracts with California water users, water not needed by a senior priority holder flows down through the priority system to become available to a junior priority holder. One cannot therefore attribute unused water as belonging to any individual entitlement holder in California. This is particularly true with respect to the priorities held by the agricultural agencies in California which are not quantified within the first three priorities. The mischief caused by this language can be eliminated by (1) splitting the definition of "authorized entity" into two separate definitions, one for a storing entity, which would contain the tighter definition

proposed by AWBA, and a second that would define "consuming entity"; (2) limiting the focus of the rule to storage activities in Arizona; and (3) deleting the language referring to storage of unused entitlement.

A third area of concern to Coachella deals with the relationship between unused apportionment that can be directed to storage in another state and the priority system established in the Secretary's contracts with water users in California. As explained above, the cascading priority system in California does not vest any California contractor with ownership of "unused apportionment." Absent the agreement of junior priority holders, it is not possible for a senior priority holder to agree to make available unused apportionment for storage in another state. The Arizona statutes governing AWBA provide that water that will become unused apportionment available for storage in that state must flow through the Arizona priority system. The proposed rule should include the same protection for priority holders in other states before any of a consuming state's unused apportionment may be directed for storage in a storing state.

Fourth, is a concern similar to that expressed above, but relating to the relationship between "intentionally created unused apportionment" and the priority system in California. The proposed rule specifies that intentionally created unused apportionment in a storing state may not be used by any other

user in the storing state. When applied to California, this is patently inconsistent with the Secretary's contracts specifying that water will be delivered in accordance with the priority system of the Seven Party Agreement.

Of even greater concern to Coachella, was the revision suggested at the Bureau workshop that the proposed rule be modified to specify that intentionally created unused apportionment may be directed around and thus bypass the priority system in the consuming state so that it may be delivered directly to the contracting entity in the consuming state. Again, this provision would be patently inconsistent with the Secretary's existing contracts in California. The rule should be modified to specifically state that intentionally created unused apportionment when delivered to a consuming state must flow through that state's priority system unless affected priority holders have consented to allow it to bypass the priority system.

Finally, Coachella is concerned regarding the relationship between the Secretary's existing contracts with California users and the proposed contracts by which the Secretary will exercise his discretion, under Article II(B)(6) of the Decree to specifically direct unused apportionment of one state to another state as a means of implementing interstate offstream storage agreements. Coachella poses the question that if the Secretary can, by contract, agree to limit and to specify the manner in

which he will exercise his discretion in allocating unused apportionment, has he not already done so by the contracts he has signed with the California users to deliver 5.3 million acre feet per annum? Neither the proposed rule nor the prefatory material furnish any legal explanation why the California contracts would not have claim to unused apportionment as against a later executed contract under the proposed rule. Should not the proposed rule require the consent of the California contractors before secretarial approval of an interstate storage agreement is given?

3. The proposed rule should include provisions requiring independent verification of intentionally created unused apportionment and a process for prompt resolution of disputes over verification.

The proposed rule does not describe the means by which intentionally created unused apportionment may be created. Some methods, i.e., groundwater production, are easily verified, while others, i.e., land fallowing, can present numerous verification problems. The proposed regulation merely requires the storing state to certify that it has created the intentionally unused apportionment. Coachella believes that without independent verification, by the Bureau, and a process for prompt resolution of disputes over verification, there is a significant possibility

that the rights of existing entitlement holders could be impaired by the operation of an interstate storage agreement.

4. The proposed rule should provide for intra-department appeals of decisions of the Regional Director.

The proposed rule, Section 414.2, defines "Secretary" as the Secretary of the Interior or authorized representative. This implies that the Secretary may delegate his decision making authority over the activities governed by this rule to others within the Department of the Interior. Coachella believes that it would be prudent to provide for an appeal process within the Department if such delegation occurs, rather than requiring the parties to resort directly to court action under the Administrative Procedure Act.

5. The proposed rule should be reissued with modifications for further public comment.

Entities in Arizona, Nevada and California have all proposed comments which, if acted upon, will result in significant changes to the proposed rule. To insure that modifications of the rule will not inadvertently impair the interests of water users in those three states, Coachella strongly believes that a modified rule should be reissued for additional public comment. Water rights to the Colorado River in the Lower Colorado River region

are a very serious matter for all of the interested parties since the river is the life blood of agriculture and industry in the region. The Bureau should not proceed with undue haste by promulgating a final rule that may inadvertently compromise the rights of some users and force those users to seek judicial review of the rule. It is far better to proceed deliberately and cautiously in such a complex area.

Finally, in submitting these comments, Coachella does not intend to waive by omission any rights that it may have under its existing contracts with the Secretary and the Law of the River. Furthermore, Coachella reserves its right to comment upon and object to, should that be necessary to protect its rights, any specific interstate storage agreement that the Secretary may consider and approve under the proposed rule.

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

TWO CALIFORNIA PLAZA
350 SOUTH GRAND
MAILING ADDRESS: BOX 54153
LOS ANGELES, CALIFORNIA 90054

FACSIMILE TRANSMITTAL COVER SHEET

DATE: 10/21/98

TO: U. S. Bureau of Reclamation, Administrative Record (COMPANY NAME) — Lower Colorado Regional Office (FACILITY)

ATTN: Dale Ensminger EXT. # (702) 293-8659 COMPANY FAX NO. (702) 293-8042

FROM: Jan Matusak (NAME) — Planning and Resources/Colorado River Resources (DIVISION/SECTION)

OFFICE TELEPHONE NO.: (213) 217-6772 FACSIMILE TELEPHONE NO.: (213) 217-6949

COMMENTS:

In accordance with our telephone conversation today that transmittal by facsimile is an acceptable means of submitting comments on the Bureau of Reclamation's proposed rule, "Offstream Storage of Colorado River Water and Interstate Redemption of Storage Credits in the Lower Division States", attached are Metropolitan's comments.

TOTAL NUMBER OF PAGES TRANSMITTED INCLUDING COVER SHEET 4

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Miss-Shell Harris (NAME) (213) 217-6726

FORM 1448 R3/93

MWD
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Office of the General Manager

October 21, 1998

VIA FACSIMILE

Bureau of Reclamation
Administrative Record
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

Attention: Mr. Dale Ensminger
Boulder Canyon Operations Office

Dear Mr. Ensminger:

Additional Comments on the Proposed Rule, Offstream Storage of Colorado River Water and Interstate Redemption of Storage Credits In the Lower Division States

The Department of the Interior notice in the September 21, 1998 issue of the Federal Register reopened the comment period on the proposed rule entitled "Offstream Storage of Colorado River Water and Interstate Redemption of Storage Credits in the Lower Division States." As a potentially affected public agency, the Metropolitan Water District of Southern California (Metropolitan) appreciates the opportunity to provide additional comments regarding the definition of authorized entity found in Section 414.2 of the proposed rule. Metropolitan previously submitted comments dated April 3, 1998 on the proposed rule.

The notice invited comments on the following questions:

> Should the definition of "authorized entity" be revised to clarify that an authorized entity, including a State Water Bank, must hold an entitlement to Colorado River water in order to ensure consistency with the Law of the River including specifically Section 5 of the Boulder Canyon Project Act (BCPA), 43 U.S.C. 617d, as interpreted by the U.S. Supreme Court in *Arizona* v. *California*, 373 U.S. 546 (1963)?
>
> Should an approved Interstate Storage Agreement and a contract under Section 5 of the Boulder Canyon Project Act be combined into one document, thus making the parties entitlement holders upon execution of the agreement?
>
> If not combined, should the Interstate Storage Agreement and any separate Section 5 contract (or amendments to an existing contract) be processed and

approved simultaneously to eliminate duplication of any administrative and compliance procedures?

In considering this matter, Metropolitan has reviewed pages 45 to 47, "Legality of Deliveries of CAP Water to/for the Benefit of the Arizona Water Bank Authority", of the "Joint Report Outlining Legal and Factual Issues and Evidence to be Presented, and Dividing Trial into Proposed Phases" in *Central Arizona Water Conservation District* v. *United States of America; United States Department of the Interior, Bureau of Reclamation; Bruce Babbitt, Secretary of the Interior, et al.* In this litigation the United States has taken the position that past (1997) and current (1998) water deliveries by the Central Arizona Water Conservation District (CAWCD) of Colorado River water for the benefit of the Arizona Water Banking Authority violate 43 U.S.C. § 617d and are not authorized by the 1988 Contract between CAWCD and the United States, among other matters.

Considering the foregoing, Metropolitan believes the definition of "authorized entity" should be revised to clarify that an authorized entity, including a State Water Bank, must hold an entitlement to Colorado River water to ensure consistency with specifically Section 5 of the Boulder Canyon Project Act, 43 U.S.C. § 617d, as interpreted by the U.S. Supreme Court in *Arizona* v. *California*.

Metropolitan continues to believe that the term "authorized entity" should be revised further, and separated into two definitions, one for "authorized storing entity" and one for "authorized consuming entity". The rule should not preclude Metropolitan from entering into an agreement with the Arizona Water Banking Authority. Metropolitan requests that the Bureau of Reclamation (Bureau) revise its proposed rule to include the following definitions:

> "Authorized consuming entity" means an entity holding an entitlement to delivery of Colorado River water having the power pursuant to applicable laws of that State to enter into Interstate Storage Agreements.
>
> "Authorized storing entity" means: (1) a State water banking authority holding an entitlement to delivery of Colorado River water expressly authorized pursuant to applicable laws of Lower Division States; or (2) in the event there is no State water banking authority -- an entity of a Lower Division State holding an entitlement to delivery of Colorado River water authorized to enter into interstate storage agreements.

Whether approval of an Interstate Storage Agreement and contract under Section 5 of the BCPA should be combined or if not combined, processed and approved simultaneously, should be left to the proponents of the Interstate Storage Agreement to propose in the particular transaction at hand. In certain instances, one or both of the parties to the transaction may already hold an entitlement to delivery of Colorado River water under a BCPA Section 5 contract. In such a situation it is not necessary to bring an existing contract into the approval process.

Metropolitan requests that the Bureau revise its proposed rule in other respects in accordance with the comments Metropolitan submitted on April 3, 1998. In particular, the storage of water which is conserved and/or saved through agreement(s) between two agencies, in which one agency provides funds to another agency or water users within that agency's service area to undertake a water conservation program or land fallowing program, must be permitted under the rule. Also, in years when surplus water is needed to keep Metropolitan's Colorado River Aqueduct full and permit offstream storage pursuant to Interstate Storage Agreements, the Secretary of the Interior (Secretary) must set the water available at a level sufficient to achieve these two objectives. In addition, at the time an Interstate Storage Agreement is before the Secretary for consideration, all affected parties should be given adequate opportunity to analyze the proposed transaction to determine the effects of such a transaction and to comment. The Secretary should not approve an Interstate Storage Agreement which impairs or modifies the rights of existing entitlement holders.

By submitting these comments, Metropolitan does not waive or intend to waive any rights which it may have pursuant to its contracts for delivery of Colorado River water and/or any provisions of the Law of the River or other applicable law.

If the Bureau has any questions regarding Metropolitan's comments, Karen L. Tachiki, Assistant General Counsel, may be reached at (213) 217-6331.

Very truly yours,

FOR: John R. Wodraska
General Manager

HMR:jpa
e:\client\10\[illegible]

From: "John A. Fritschie" <JFritschie@Defender.Defenders.org>
To: ibr3dm10.IBR3SMTP("bjohnson@lc.usbr.gov")
Date: 10/19/98 5:56pm
Subject: offstream banking regs comments

attached and hard copy in mail

October 18, 1998

Bureau of Reclamation
Administrative Record
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

To Whom It Concerns:

On behalf of Defenders of Wildlife and its over 300,000 members and supporters, I am writing to comment on the proposed regulations for "Offstream Storage of Colorado River Water and Interstate Redemption of Storage Credits in the Lower Division States." By Federal Register notice dated September 21, 1998, the Bureau reopened the comment period on the proposed regulations to solicit comments on whether only entitlement holders should be allowed to bank water. The notice stated that numerous, conflicting technical comments had been received regarding legal definitions and other matters related to the authority to carry out such storage and trading of Colorado River water. Immediately upon my learning of the reopened comment period, by email dated October 2, 1998, I requested an extension of the comment period and copies of all comments that were the basis for reopening the comment period in order to enable Defenders of Wildlife to provide its views on these issues related to a groundbreaking change in the management of the Colorado River -- an issue in which Defenders members are deeply interested. I did not receive copies of the comments until the afternoon of October 16th and to the best of my knowledge have not been granted an extension of the comment period. Therefore, Defenders of Wildlife is unable to provide detailed and fully informed comments on these issues by the close of the comment period on the 21st.

Instead, Defenders offers the following positions. First, Defenders believes that it is wholly unacceptable to issue regulations for the offstream storage and transfer of surplus Colorado River water in the absence of criteria for determining surplus conditions that take into account the water needs of the ecosystems of the Colorado River and Delta, as well as the needs of endangered species such as the razorback sucker, bonytail chub, and totoaba. Second, Defenders believes that to promulgate such regulations apart from and in advance of the development of a comprehensive management plan for the Colorado River that assures compliance with the Endangered Species Act -- which the environmental community has been assured is the purpose of the ongoing Multi-species Conservation Program -- is an affront to the Department's commitment to that multi-stakeholder process. Water marketing may be an appropriate means of achieving redistribution of water use to improve efficiency and to meet changing needs for water in the west, as

well as
conservation, so long as it is not done in the absence of criteria for the declaration of surpluses and it is not done in isolation from the processes designed to ensure conservation of endangered species and other environmental values.

Moreover, specific provision should be made for banking water for environmental purposes. Defenders believes that a condition for any trading of water should be that a portion of the water goes into a bank for future environmental restoration. It should be further explicitly recognized prior to the allowance of such surplus storage and trading that the Department's public trust obligations and obligations under the Nation's environmental laws require sufficient instream flows to maintain the River's biodiversity and natural functions. Defenders strongly urges that promulgation of these regulations be postponed and that proposals for water marketing on the Colorado River be considered through the MSCP process.

However, if the Department insists on promulgating these regulations at this point, Defenders must reiterate its strong objection to reliance on the ongoing MSCP as reason to obviate current and full compliance with the ESA and the National Environmental Policy Act. The environmental assessment prepared by the Bureau is wholly inadequate in its analysis of the environmental impacts of the this proposal and alternatives to the proposal. Defenders and the Southwest Center for Biological Diversity will be submitting under separate cover research which documents the significant environmental values that can be achieved with the amount of water that will be removed from the River under these regulations.

Thank you for your consideration.

Sincerely,

John Fritschie

From: Steve Glazer <sglazer@csn.net>
To: ibr3dm10.IBR3SMTP("bjohnson@lc.usbr.gov")
Date: 10/21/98 11:58am
Subject: Additional comments/Offstream Storage of Colorado River Water

10/20/98

Bureau of Reclamation

Administrative Record
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

Re: Additional comments/Offstream Storage of Colorado River Water and Interstate Redemption of Storage Credits in the Lower Basin.

On behalf of the Sierra Club, its Colorado River Task Force, California/Nevada and Southwest Regional Conservation Committees, we thank you for this opportunity to add additional comments on the above mentioned proposed rule. As we stated in our original comments, "the Secretary should develop a comprehensive conservation and management plan which protects the environment before implementing this Proposed Rule." The question of whether an authorized entity in a Storing State must hold an "entitlement" to Colorado River water is an important one.

The language defining an authorized entity should be flexible enough to allow water procured for environmental protection or enhancement to be stored and returned to the river in a timely manner. As documented in "Saving Our Streams Through Water Markets" by Clay Landry (Political Economy Research Center, 502 S. 19t Ave., Bozeman, MT 95719), many federal, state and private entities have been purchasing, leasing and receiving donations of senior water rights for environmental protection and restoration. Offstream Storage should be added to the toolbox of mechanisms useful in recovering endangered, threatened and declining species. With a properly executed and legal contract or Interstate Storage Agreement for acceptance and delivery, a State Water Bank should be permitted to receive water from an entitlement holder or its assigns.

Another useful mechanism would be to allow Upper Basin allocations to be stored for environmental protection. Since there are more unutilized water allocations in the Upper Basin than in the Lower Basin, some of this water should be allowed to be acquired and stored in the Lower Basin for environmental purposes. This should not be considered as prohibited by the Compact. It is not the same as interbasin water marketing.

Sincerely,
Steve Glazer
Sierra Club
Colorado River Task Force, Chair
Southwest Regional Conservation Committee, Chair
P. O. Box 459
Crested Butte, CO 81224

Southwest Center
for
Biological Diversity

protecting and restoring the southwest's deserts, rivers, forests, and wildlife

Bureau of Reclamation
Administrative Record
Lower Colorado Regional Office
40 Railroad Avenue
Boulder City, NV 89006

October 19, 1998

Attn: Mr. Dale Ensminger
Re: Additional Comments on Proposed Rule and Draft Environmental Assessment: Offstream Storage of Colorado River Water and Interstate Redemption of Storage Credits, Lower Division States

Dear Mr. Ensminger:
As per John Fritschie (Defenders of Wildlife) comments of October 18, 1998, enclosed please find a copy of "Importance of United States Water Flows to the Colorado River Delta and the Northern Gulf of California, Mexico." This report is submitted for your consideration on behalf of both the Southwest Center and Defenders of Wildlife.

Sincerely,

David Hogan

Tucson Office PO Box 710 Tucson, AZ 85702-0710 TEL: 520 623 5252, ext. 307 FAX: 520 623 9797
E-mail: dhogan@sw-center.org http://www.sw-center.org

Importance of United States' Water Flows To the Colorado River Delta and the Northern Gulf of California, Mexico

Prepared for

Defenders of Wildlife

and

Southwest Center for Biological Diversity

October 13, 1998

Edward P. Glenn
Environmental Research Laboratory
The University of Arizona
2601 E. Airport Drive
Tucson, AZ 85706

Carlos Valdes-Casillas
Instituto Tecnologico y de Estudios
Superiores de Monterrey (ITESM)- Campus Guaymas
Centro de Conservacion y Aprovechamiento de los
Recursos Naturales (CECARENA)
Unidad de Informacion Biogeografica (UIB)
Apdo. Postal 484, Guaymas, Sonora 85400, Mexico

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Summary

The delta of the Colorado River has been partially revegetated by the discharge of flood waters and agricultural drain water from the United States to Mexico during the last twenty years. The current flood plain encompasses approximately 60,000 ha (150,000 acres) of riparian forest, emergent marsh and intertidal wetland ecosystems. The flood plain represents a large natural area amidst agricultural and urban development. The dominant woody species throughout the delta flood plain, as elsewhere on the lower Colorado River, is the exotic shrub, *Tamarisk ramosissima* (salt cedar). However, large areas of *Populus fremontii - Salix gooddingii* (cottonwood - willow) native gallery forest have reestablished in the riparian zone, while agricultural drain water from the United States supports emergent *Typha* marshland containing endangered bird and fish species. The flood flows of the past eighteen years also appear to have stimulated the shrimp catch and other elements of the marine ecosystem in the upper Gulf of California. The delta ecosystems currently contain more high-quality wildlife habitat than the stretch of river from Grand Canyon to Morelos Dam in the United States. The water requirements to maintain these ecosystems appear to be modest (less than 1% of the annual river flow). The needs of the delta ecosystems should be taken into account in the Lower Colorado River Multi-Species Conservation Plan currently under development.

Introduction

This report summarizes information on the effects of fresh water flows from the United States on the riparian and marine ecosystems of the Colorado River delta in Mexico (Figure 1). There has been little formal, scientific documentation of the Colorado River delta ecosystems since Sykes (1937). The report is based on a variety of sources of information, including published reports, government documents, unpublished data and personal observations. Some of the information is from reports and manuscripts still in preparation or review. The interpretations and conclusions offered in this report are mine and not necessarily those of the scientists and others who provided information. Both English and metric units of measurement are given in the text. The exponential system of denoting units is used, in which (for example) cubic meters per year is expressed as $m^3\ yr^{-1}$.

The Colorado River delta in Mexico contains thousands of hectares of habitats that have become rare along the river in the United States (Glenn et al., 1996; Valdes et al., 1998). These areas are relevant to the United States' conservation interests for two reasons. First, the delta is an essential component of the lower Colorado River riparian zone, which stretches from the Grand Canyon in Arizona to the Gulf of California in Mexico. Any scientific management plan for the recovery of the Colorado River must include the delta even if it is separated from the rest of the river by an international border. Second, the delta

ecosystems are almost entirely supported by waste water flows or flood releases from the United States. Therefore, United States water management agencies directly impact these habitat areas by controlling the flow of water across the border. U.S. water releases into the Gulf of California not only benefit the riparian habitats, they also appear to stimulate productivity in the marine ecosystem which supports important fisheries and endangered species (Galindo-Bect et al., 1998).

As with other desert rivers (Stanley & Warne 1993; Snead 1987; Leichenko & Wescoat 1993; Hart et al. 1990), the lower Colorado River ecozones have been severely disrupted by dams, flow diversion for agriculture and channelization of the river bed (Briggs 1996; Busch & Smith 1995; Stromberg & Patten 1991; Szaro 1989). Increases in river bank salinity and other alterations of the riparian zone have favored the establishment of invasive, salt tolerant species (Glenn et al., 1998). Along most of the river the native gallery forests of cottonwoods (*Populus fremontii*) and willow (*Salix goodingii*) have been replaced by the introduced shrub, salt cedar (*Tamarix ramosissima*), with a resulting loss in habitat for native fauna (Ohmart et al. 1988).

In recent years an effort has been made to remediate some of the damage to the riparian zone in the United States (Anderson and Ohmart, 1985; Briggs, 1996). The Lower Colorado River Multi-Species Conservation Program that is under development by the United States Department of the Interior and stakeholders in

California, Arizona and Nevada is presently limited in scope to the main stem of the River from Lee's Ferry, Arizona to the Southerly International Boundary with Mexico (Worthly, 1998). The marsh and riparian habitats along the U.S. stretch of river are now regularly monitored (M. Balogh, U.S. Bureau of Reclamation, Boulder, Colorado) and taken into account when water management decisions are made (United States Bureau of Reclamation, 1996). No official recognition is given to the delta ecosystems in Mexico, however.

Finding water to use for riparian restoration projects in the United States is difficult, as the Colorado River now serves approximately 23 million people in the southwest United States, northwest Mexico and the southern California coastal plain. As a result, most of the restoration projects in the United States are of limited size (less than 100 ha)(Anderson and Ohmart, 1985). They are also expensive to implement and do not always produce the desired results (Briggs 1996). By contrast, the delta ecosystems described in this report are primarily maintained by waste water and flood flows and with proper management they can be sustained at relatively low cost in terms of money or water.

Water flows to the delta

Since the filling of Lake Powell behind Glen Canyon Dam in 1981, large volumes of water have been released to the Colorado River delta during wet years on the watershed (Figure 2)(flow information supplied by International Boundary Water Commission

and U.S. Bureau of Reclamation, Yuma, Arizona). From 1980-1998 releases to the delta and the Gulf of California have averaged 3,610,000,000 m^3 yr^{-1} (2,930,000 acre-ft), for a total of 65,000,000,000 m^3 (52,700,000 acre-ft), which is about 20% of the total amount of water that flowed in the river below Lee's Ferry over those years. There were substantial flows in 10 of the 18 years. However, the largest releases were in the early 1980's, and flows after 1986 have been more sporadic and of much lower volume. The releases have been associated with wet years on the watershed due to El Nino events in 1982-83, 1992-1993 and 1997-1998. The 1993 flows were due to flood releases from Painted Rock Dam on the Gila River, but all other flows were releases from Lake Mead on the Colorado River. The U.S. Bureau of Reclamation has proposed new regulations and projects, including off stream storage of water and privatization of the Wellton-Mohawk Irrigation District which are likely to reduce such flows, without considering the impact on the delta ecosystems (U.S. Bureau of Reclamation, 1997).

Agricultural drain water from the United States also enters the delta via the MODE canal carrying water pumped from the shallow aquifer in the Wellton-Mohawk Irrigation District in Arizona (Glenn et al., 1992; Burnett et al., 1993). This water began to flow in 1977 and averaged 160,000,000 m^3 yr^{-1} (127,000 acre-ft) containing 2,000-3,000 mg L^{-1} salts (approximately 15% of ocean salinity) from 1978-1997. Although this has been a fairly constant source of water, the trend has been towards lower

volumes and salinities of water over the years due to lower pumping rates in the district and lower salinities of the groundwater. This water is discharged onto a depression on the eastern shore of the delta north of the town of El Golfo de Santa Clara where it has created the Cienega de Santa Clara, a brackish wetland. The Cienega forms an evaporation basin with a limited connection to the Gulf of California (Burnett et al., 1993).

These combined flood releases and waste flows have had the unplanned effect of revegetating a large portion of the delta below the agricultural fields in Mexico, and of revitalizing the marine zone during years of runoff (Glenn et al., 1996; Galindo-Bect et al., 1998). The following sections document the effects of these river flows on the riparian and wetland ecosystems of the delta and on the shrimp catch in the northern Gulf of California, which is taken as an indication of productivity in the marine ecosystem. A final section estimates the river flows needed to sustain these ecosystems into the future.

Revegetation of riparian and wetland habitats in the delta

Prior to resumption of flows in the Colorado River beginning in 1980, the riparian zone of the river from Morelos Dam to the junction with the Rio Hardy was apparently a dry ecosystem, dominated by widely spaced *Prosopis* (mesquite) trees (based on inspection of 1972 aerial photographs and interviews with residents; Carlos Valdes, unpublished data). Below the junction of the two rivers the channel has been perennial, due to the

discharge of agricultural drain water from the Mexicali Valley and tide water entering from the Gulf of California. A natural dam 35 km (21 miles) north of the mouth of the river created a flooded area of approximately 35,000 ha (88,000 acres) below the junction of rivers (Payne et al., 1992). This dam was swept away by the floods of the early 1980's and today there is no permanent water except in the river channel below the junction (Payne et al., 1992; Glenn et al., 1996). However, the overflow water during flood years has created a vegetated riparian zone of approximately 60,000 ha (150,000 acres) stretching from Morelos Dam to the intertidal zone of the Gulf of California (Valdes et al., 1998)(Figure 1). The flood plain is enclosed within protective, earth levees on the east and west sides which prevent flooding of the agricultural fields. This area includes the woody vegetation along the main stem of the river as well as the wetland habitats in the southeastern portion of the delta that receive agricultural drain water.

The flood plain and associated vegetation have been mapped using satellite imagery, low-level aerial videography and ground surveys (Valdes et al., 1998). The image analysis was based on interpretation of two, 1997 Thematic Mapper satellite images, one acquired February 21 when approximately 100 m^3 s^{-1} (3400 cubic ft. s^{-1}) was flowing to the sea but the vegetation response was at its annual minimum, and the other acquired July 15 when the river was not flowing but the vegetation response was maximal (Figure 3). Spectral analysis by the Soil Adjusted Vegetation Index

(SAVI) method (Huete, 1988) mapped the vegetation by biointensity class. The riparian vegetation along the main stem of the river was divided into 4 classes, R1-R4, where R1 was the highest biomass intensity class and R4 the lowest. R1 vegetation formed a multilayered closed canopy whereas the R4 class was sparse vegetation separated by bare soil. The SAVI analysis also recognized two emergent wetland classes, consisting of vegetation and open water. These were designated W1 and W2 where W1 had higher biomass intensity than W1. The analysis also differentiated intertidal areas vegetated with Palmer's saltgrass (*Distichlis palmeri)*, and open water areas. Based on ground surveys and low-level, aerial videography, the riparian zone was divided into 7 zones based on the type of vegetation present, and within each zone the intensity of vegetation was delineated using SAVI analysis (Figure 4). The acreage of each intensity class and the dominant species in each zone are in Table 1, which also assigns the R1 vegetation of each zone into one of the six vertical structure classifications recognized by Anderson and Ohmart (1986). The species composition and vertical structure class were used to estimate the density of resident and migratory summer birds that the R1 habitats could support (Anderson and Ohmart, 1986)(Table 1).

Approximately half of the 60,000 ha (150,000 acres) of flood plain area was covered with high biomass intensity vegetation (R1 or W1)(Figure 4, Table 1). Three types of habitats dominate the delta: 1) deciduous, riparian forest along the main stem of the

river; 2) saltgrass flats in the intertidal zone; and 3), emergent (flooded) wetlands supported by agricultural drainage water. A more detailed description of each zone follows.

Description by zones

Zone 1 extends along the river for approximately 10 km (6 miles) south of Morelos Dam. Most of Zone 1 was not included on the satellite images so the vegetation was mapped using ground surveys and low-level, aerial photographs taken July 1, 1997 (United States Bureau of Reclamation, Yuma Projects Office, Arizona). This zone is narrow and contains 170 ha (425 acres) of dense *Salix goodingii* (willow) thickets, with occasional specimens of *Populus fremontii* (cottonwood). Most of the willows are under 4 m (13') and appear to be the result of 1993 flooding, but some trees are as tall as 15 m (50') and appear to date back to the floods of the early 1980's. This zone is classified as Type III in terms of vertical structure, as it is dominated by midstory vegetation with little understory or overstory development.

Zones 2 and 3 are wider than Zone 1 and the R1 vegetation is classified as open and closed gallery forest dominated by the cottonwood-willow association (the native riparian forest association of the Colorado River). They contain approximately 1500 ha (3750 acres) of this habitat, most of which is in Zone 3. The trees are in different size classes that appear to correspond to floods of the 1980's (trees up to 15 m) and 1993 (trees up to

5 m). In places there are extensive carpets of cottonwood and willow seedlings establishing along the river banks, apparently from winter flood releases of 1997.

The flood plain widens in Zones 4 and 5 after the junction with the Rio Hardy, and the river divides into numerous subsidiary channels that rejoin into a single channel in Zone 6 as the river approaches the sea. The R1 vegetation in Zone 4 totals approximately 5200 ha (13,000 acres) and is a mix of mesquite, cottonwood-willow and *Tamarisk ramosissima* (salt cedar). Mesquite and salt-cedar dominate the flats away from the river channels, whereas cottonwoods and willows line the river banks. By contrast, the 6000 ha (15,000 acres) of R1 vegetation in Zone 5 is a near-monoculture of salt cedar. Salt cedar is more salt tolerant than cottonwood or willow (Glenn et al., 1998), and the floodplain becomes increasingly more salt-affected as the river approaches the sea. This is partly from the intertidal influence, which extends 56 km (34 miles) from the mouth of the river due to the high tides of the northern Gulf of California (Payne et al., 1992), and partly from the discharge of saline agricultural drain water into the river via the Rio Hardy system. Zone 6 is too saline even for salt cedar, and the dominant vegetation along the river banks is 442 ha (1105 acres) of *Distichlis palmeri* (Palmer's saltgrass). This is the only endemic grass in the Sonoran Desert, and the grain was harvested by the Cocopah people (Kniffen, 1931).

Zone 7 is not directly connected to the main stem of the

river, but it contains the Cienega de Santa Clara, supported by drain water from the MODE (85%) and Riito (15%) canals which originate in the Wellton-Mohawk and San Luis irrigation districts, respectively (Burnett et al., 1993). This wetland contains 4200 ha (10,500 acres) of emergent vegetation dominated by *Typha domengensis* (cattail) with 8 other hydrophytes occurring as subdominants (Zengel et al., 1995). It supports endangered Yuma clapper rails (Eddleman, 1989) and desert pupfish (Zengel and Glenn, 1996) as well as significant wading bird shallow-water habitat (Mellink et al., 1996, 1997). Zone 7 also contains El Indio wetland, supported by drainage water from San Luis (volume unknown) and El Doctor wetlands, supported by natural artesian springs (Zengel et al., 1995). These are smaller wetlands than the Cienega de Santa Clara and much of the vegetation is classified as R1, because they tend to be dominated by salt cedar and mesquite rather than emergent plants. Zone 7 also contains 377 ha (940 acres) of Palmer's grass in the intertidal zone below Cienega de Santa Clara (Zengel et al., 1995).

Effect of Colorado River flows on the marine zone

The northern Gulf of California is a sensitive marine ecosystem, now receiving some protection as part of the Biosphere Reserve of the Upper Gulf of California and Colorado River Delta (Morales-Abril, 1994). It contains two U.S. and international listed endangered species, the vaquita porpoise and totoaba fish. It supports shrimp and finfish fisheries on which the economies

of San Felip, El Golfo de Santa Clara and Puerto Penasco have traditionally been based. Local fishermen have suspected for many years that the fish and shrimp stocks are dependent on flows in the Colorado River (R. Cudney, University of Arizona Department of Renewable and Natural Resources, master's thesis in preparation). The resumption in flows since 1979 has allowed a test of the relationship between river flows and the shrimp catch at San Felipe, the nearest fishing port to the mouth of the river from which long-term data are available (Galindo-Bect et al., 1998).

Both shrimp catch and number of trawlers have declined significantly over the last 21 years (Galindo-Bect et al., 1998). From 1977-1998 the San Felipe catch declined from a peak of approximately 700 MT (770 tons) in 1984, to under 300 MT (330 tons) in 1993, while the number of trawlers decreased from 62 to 22 from 1981-1998 (the years for which data are available). The catch per unit effort (CPUE), estimated by dividing the catch by the number of trawlers, varied from 5 to 15 MT (6 to 17 tons) per trawler due to changes in the structure of the industry with no evident time trend. The total annual landings were significantly correlated with flow in the river (Table 2). The strongest relationship was between shrimp catch and the log of the previous year's river flow; the equation describing this relationship is Catch (metric tons per year) = 207 + 93 x log Previous Year's River Flow (millions of cubic meters). The lag between river flow and shrimp catch is expected, since shrimp in the northern

Gulf of California require approximately 1 year to reach harvest size. The logarithmic relationship shows that increased volumes of flow yield diminishing returns of shrimp catch. For example, the 1997 flow of approximately 1,000,000,000 m^3 yr^{-1} (800,000 acre-ft) will potentially increase the 1998 shrimp catch to 486 metric tons (535 English tons) in 1998, while a ten times greater flow would only increase the catch to 580 metric tons (637 English tons).

The mechanism by which the shrimp catch is stimulated by river flows is not understood. The upper Gulf of California is high in nutrients even in the absence of flow, hence inflow of nutrients is probably not the mechanism (Hernandez-Ayon et al., 1993). The estuarine zone, including the intertidal portion of the river channel, may provide a protected, low-salinity nursery area for larval shrimp and fish fry when the river flows, into which predator fish cannot penetrate(Day et al., 1989). Fishery data for El Golfo de Santa Clara from 1988-1998 show that the corvina catch has increased by a factor of ten, and the catch increased most after the river flows of 1993 (J. Carlos Barrelas, SEMNARP, private communication). Similarly, according to preliminary data from a CONACYT study, vaquita and totoaba in the estuarine zone may be more numerous in years following flooding (Silvia Manzania, private communication). The information compiled to date indicates that additional and comprehensive studies on the effects of Colorado River flooding on the marine ecosystem are warranted.

Comparison of delta ecosystems with the lower Colorado River ecosystems in the United States

We compared Zones 1-5 in Mexico to the riparian zone of the Colorado River in the United States from Davis Dam to Morelos Dam (Anderson and Ohmart, 1986; M. Balogh, U.S. Bureau of Reclamation, Boulder, Nevada)(Table 3). (We redefined our habitat classes in Table 1 to fit those currently in use by the U.S. Bureau of Reclamation, hence Tables 1 and 3 are not exactly comparable). The vegetated, flood plain area in Mexico is 59,401 ha (150,000 acres) compared to 34,096 (84,000 acres) in the United States (1997 data, M. Balogh, U.S. Bureau of Reclamation, Boulder, Nevada). Zone 1 contains the most significant acreage of willow thickets left on the river. Zones 2 and 3 contain 1,480 ha (4000 acres) of native, cottonwood and willow gallery forest, considered to be the most valuable type of riparian habitat (Ohmart and Anderson, 1988). Zone 4 contains an additional 5,199 ha (11,000 acres) which are dominated by salt cedar but on which cottonwoods, willows and mesquites are present. By contrast, the U.S. river stretch contains only 100 ha (250 acres) of gallery forest and only 1460 ha (3600 acres) of land on which cottonwoods and willows are present at 10% or greater abundance.

Bird density has not been investigated in detail in the riparian habitat of the delta, but the species composition in the Mexicali Valley is similar to the lower Colorado River in the United States (Ruiz-Campos and Rodriguez-Merez, 1997). Based on

the relationship between bird density and habitat type on the U.S. stretch of river (Anderson and Ohmart, 1986), the delta can potentially support 68,000 resident and 49,000 non-resident summer birds in the R1 vegetation of Zones 1-5. Additional bird habitat is provided in the lower-intensity vegetation zones (R2-R4 classes). The delta emergent wetlands (W1 and W2 vegetation classes) total 6,553 ha (14,500 acres), compared to 4,186 ha (12,000 acres) of wetlands along the Colorado River in the U.S. They may provide the largest remaining habitat for the endangered Yuma clapper rail (Eddleman, 1989) as well as habitat for other nesting (Mellink et al., 1996) and non-breeding waterbirds (Mellink et al., 1997) at this critical interface between the riparian and marine ecosystems.

Water requirements of the delta ecosystems

Figure 2 shows that the flows to the delta since 1979 have been extremely variable in timing and magnitude. Hence, any conclusions about the water requirements of the delta ecosystems based on these historical flows will be imprecise. The following recommendations are based on inference rather than direct evidence.

Timing of floods. The longest period without water since resumption of flows from the U.S. in 1980 has been the five year period 1988-1992; over that time there was a marked decline in vegetation vigor as determined by inspection of satellite images showing the summer vegetation response (Glenn et al., 1996). On

the other hand, inspection of the delta in 1997-1998 (Valdes et al., 1998) showed that the vegetation was dominated by midstory trees that appeared to have germinated in 1993. These trees survived 3 years without river flows (1994-1996). Hence, flows sufficient to induce overbank flooding throughout the riparian zone are needed at least every 4 years just to maintain existing vegetation. Flooding at 3 year intervals could enhance the riparian zone further, by stimulating greater germination of native tree species and washing salts from the river banks to discourage salt cedar growth in Zones 4 and 5. Spring and summer releases may have the most stimulatory effect on riparian growth and the marine ecosystem, but the available evidence suggests that even winter and fall releases are beneficial.

Magnitude of floods. The 1997-1998 flood releases were small compared to earlier releases, but satellite images and low-level, aerial overflights showed that the releases totaling 316,000,000 m^3 (256,000 acre-ft) from January to April, 1997, at 50-100 $m^3 s^{-1}$ (1700-3400 cubic ft s^{-1}) were of sufficient magnitude to flood the entire 60,000 ha (150,000 acres) of flood plain between the levees, and to contribute runoff into the Gulf of California and into Laguna Salada, a below-sea-level depression west of the delta. Further, the 1997 floods produced the vigorous vegetation response analyzed in the July 15, 1997 satellite image, and stimulated extensive germination of cottonwood, willow and salt cedar trees throughout the flood plain. Hence, we conclude that releases of this magnitude are

probably sufficient to maintain the riparian vegetation. Larger floods may extend the acreage of native riparian forest especially in Zone 4, which contains mixed vegetation, by reducing salinity and by scouring salt cedar from the channels and flats (Stromberg and Patten, 1991). Larger floods would likely stimulate the shrimp landings to a greater extent than smaller floods, though with diminishing returns (Galindo-Bect et al., 1998).

Annual maintenance flows. A defect of the current hydrological regime with respect to ecosystem management is the lack of perennial flow below Morelos Dam. A small annual base flow in Zones 1-3 where most of the native riparian forest has reestablished could allow reestablishment of fish and would provide a constant water source for birds and mammals (Ohmart and Anderson, 1988). We can only roughly estimate the flow needed to accomplish these objectives. This area contains about 12.5% of the high-biomass vegetation of the flood plain, hence it could perhaps be maintained with 12.5% of the flow required to flood the entire flood plain, or 40,000,000 m^3 yr^{-1} (32,000 acre-ft). Further study is needed to define the size and duration of the proposed maintenance flow.

Estimated minimum water requirements. The minimum water requirement (annual maintenance flow + 4 year, overbank flood flow) calculates to be 476,000,000 m^3 (386,000 acre-ft) over fours years, or an average of 119,000,000 m^3 yr^{-1} (96,400 acre-ft yr) which is much less than 1% of the annual base flow in the

river (20,000,000,000 m^3 yr^{-1} or 16,000,000 acre-ft). It is also far less than the average annual flow that has reached the delta since 1980 (3,610,000,000 m^3 yr^{-1} or 2,930,000 acre-ft yr). Although more water would without doubt further improve the habitat, what is most critically required now is not more water, but water delivered on a reliable schedule, and a commitment that water can be released at critical intervals to support the newly established habitats of the delta. Similarly, the wetlands maintained by agricultural drainage water from the United States do not require additional water, they only require that the current flows from Wellton-Mohawk continue into the future, or that they are replaced by water of similar quality and quantity.

Conclusions and Recommendations

The Colorado River delta contains about twice as much riparian habitat as the stretch of river from Davis Dam to Morelos Dam in the United States. It supports much more native riparian habitat in Mexico than the United States stretch of river, and supports unique habitats for water birds due to its proximity to the sea. Most of these habitats are maintained by waste water flows and recent flood releases from the United States. Judging by shrimp landings, the flood flows appear to have a significant, positive effect on the marine ecosystem, possibly by providing low-salinity habitat in the estuary which may afford shrimp larvae and fish fry protection from euryhaline predator species. Sustaining these ecosystems will require that

a very modest flow of water be set aside for their maintenance, as discussed above. The suggested minimum flows are 316,000,000 m^3 (256,000 acre-ft) every four years, plus an annual maintenance flow of 40,000,000 m^3 (32,000 acre-ft) during all other years. More frequent large floods might extend the cottonwood and willow zone further down river. Larger volumes might further stimulate productivity in the marine zone.

Currently accepted principles of conservation biology and watershed management require that an ecosystem such as the lower Colorado River be managed as a whole rather than fragmented into artificial units (Christensen et al., 1996). The delta wetland and marine ecosystems provide unique and valuable habitats which could be maintained and improved with low expenditure of money and water. Most of the water which today enters this ecosystem is flood and waste water, while the land area is regarded as unusable for agriculture due to susceptibility to flooding, yet the combination has produced more prime riparian habitat than the stretch of river in the United States. A broad-based, Lower Colorado River Multispecies Conservation Program that does not adequately consider the delta will not be regarded as scientifically sound and will fail to consider what are probably the most significant and cost-effective aquatic and riparian conservation opportunities in the lower Colorado River basin. Hence, all interests would be served if the existing multispecies conservation program took the lead in forging an international consensus on the need to conserve the ecosystems of the Colorado

River delta and upper Gulf of California in Mexico. A cooperative international agreement assuring sufficient quantities of water, delivered at the right time, is needed to conserve the delta and norther Gulf of California ecosystems for future generations.

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Table 1. Characteristics of the Colorado River delta floodplain in Mexico. Vegetation Zones were defined by floristic components based on ground surveys, while Land Cover Classes were determined by spectral analyses of satellite images; numbers after cover class refer to biomass intensity where 1 is highest and 4 is lowest. Estimates of bird diversity and density were based on the vertical vegetation structure and species composition using methods developed for lower Colorado River riparian ecosystems.

Characteristics	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Total
Area by Land Cover Class (ha):								
Riparian 1	170	248	1232	5199	5816	148	2274	15087
Riparian 2	NA	301	1136	1072	2479	826	474	6288
Riparian 3	NA	424	608	589	3837	2797	3142	11397
Riparian 4	NA	1075	1561	292	3999	5189	5722	17838
Wetland 1	NA	3	56	20	22	0	3429	3530
Wetland 2	NA	13	59	100	113	359	2379	3023
Distichlis Flats	NA	0	8	29	16	442	377	872
Open Water	NA	1	15	61	45	534	399	1055
Agriculture	NA	29	159	26	4	0	17	235
Total	246	2094	4834	7388	16331	10295	18213	59401
Principal Overstory Species (>4.5 m)*	Sg	Pf/Sg	Pf/Sg	Tr/Pf/Sg	Tr	None	None	
Principal Midstory Species (0.6-4.5 m)*	Pa	Sg/Tr	Tr/Bs	Bs/Pspp/Al	Tr	Tr	Td/Tr	
Principal Understory Species (<0.6 m)*	None	Ps	Ps/Pf	Ps/Al	Ao	Dp/Ao	Numerous	
Vertical Structure	III	I	II	III	IV			
Avifauna Habitat Value: Estimated diversity of key summer birds								
Resident	9 of 9	7 of 9	8 of 9	9 of 9	9 of 9	NA	NA	
Non-resident	9 of 9	8 of 9	8 of 9	8 of 9	6 of 9	NA	NA	
Estimated density of summer birds per 40 ha								
Resident	279	140	432	224	159	NA	NA	
Non-resident	163	132	198	150	143	NA	NA	

*Sg=*Salix goodingii*; Pf=*Populus fremontii*; Tr=*Tamarisk ramosissima*; Bg=*Baccharis salicifolia*; Pspp=*Prosopis spp.*; Al=*Atriplex lentiformis*; Td=*Typha domengensis*; Ao=*Allenrolfia occidentalis*; Dp=*Distichlis palmeri*.

Table 2. Correlation coefficients (r) and significance levels (P) from correlation analyses relating San Felipe annual shrimp landings (1977-1997) and catch per unit effort (CPUE) (1981-1997) to discharge of the Colorado River at the Southern International Boundery. 1 yr lag indicates that shrimp landings were paired with the previous year's river discharge in the correlation analysis.

Variable	Correlation with Shrimp Landings		Correlation with CPUE	
	r	P	r	P
River Discharge	0.47	0.0362	0.25	0.3360
Log_{10} River Discharge	0.54	0.0112	0.25	0.3368
River Discharge with 1 yr Lag	0.52	0.0127	0.34	0.1826
Log_{10} River Discharge with 1 yr Lag	0.67	0.0006	0.38	0.1304
Number of Trawlers	0.77	0.0003	0.18	0.4804

Table 3. Comparison of area (ha) of selected habitat types on the lower Colorado River in the United States (Davis Dam to Morelos Dam) and Mexico (Morelos Dam to the Gulf of California). Mexico data are from Valdes et al. (1998) and United States' data are from M. Balough, U.S. Bureau of Reclamation, Denver. Community areas do not add up to total vegetated area because some community types are ommitted.

	Area (ha)	
Community	United States	Mexico
Willow Thickets	none listed	170
Cottonwood - Willow Gallery Forest		
Salt cedar w/ >10% Cottonwood-Willow	98	1,480
Salt cedar	18,453	45,872
Marsh	4,186	6,553
Total Vegetated Area	34,096	59,401

Figure 1. Flood plain of the Colorado River delta in Mexico. The dark line shows the main course of the river; the shaded area is the portion of the delta that is susceptible to flooding during water releases. The dashed lines outline the major emergent wetland areas of the delta. The arrows show main points of water entry and exit in the delta; A is the main channel of the river; B is the junction of the Rio Hardy and Colorado River; C is the exit point of water from the Colorado River into Laguna Salada (not shown), a below sealevel depression west of the delta; D is the entry point of agricultural drain water from the San Luis Valley into El Indio wetlands; E is the entry point of agricultural drain water from the United States into Cienega de Santa Clara wetland via the MODE canal (this is also the entry point for agricultural drain water from San Luis via the Riito Canal); F is the mixing zone for river water and seawater from the Gulf of California north of Montague Island; and G is the tidal flats south of Cienega de Santa Clara where MODE water exiting the Cienega mixes with occasional high tides from the Gulf of California.

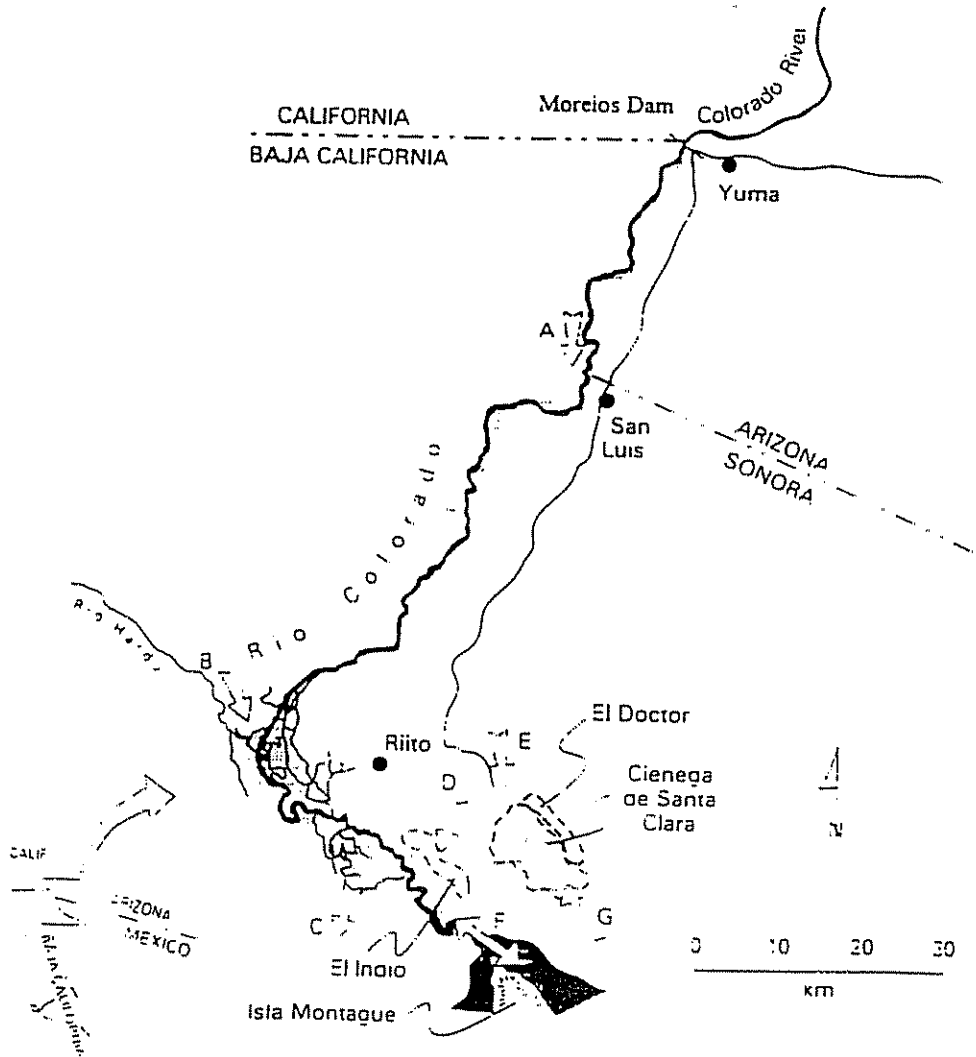


Figure 2. The main graph shows the annual water releases that have entered the delta below Morelos Dam since 1955; the insert graph shows flow rates of water during the 1997 releases. Arrows at A and B on the insert graph denote the dates on which satellite images were acquired for hydrological and vegetation analyses.

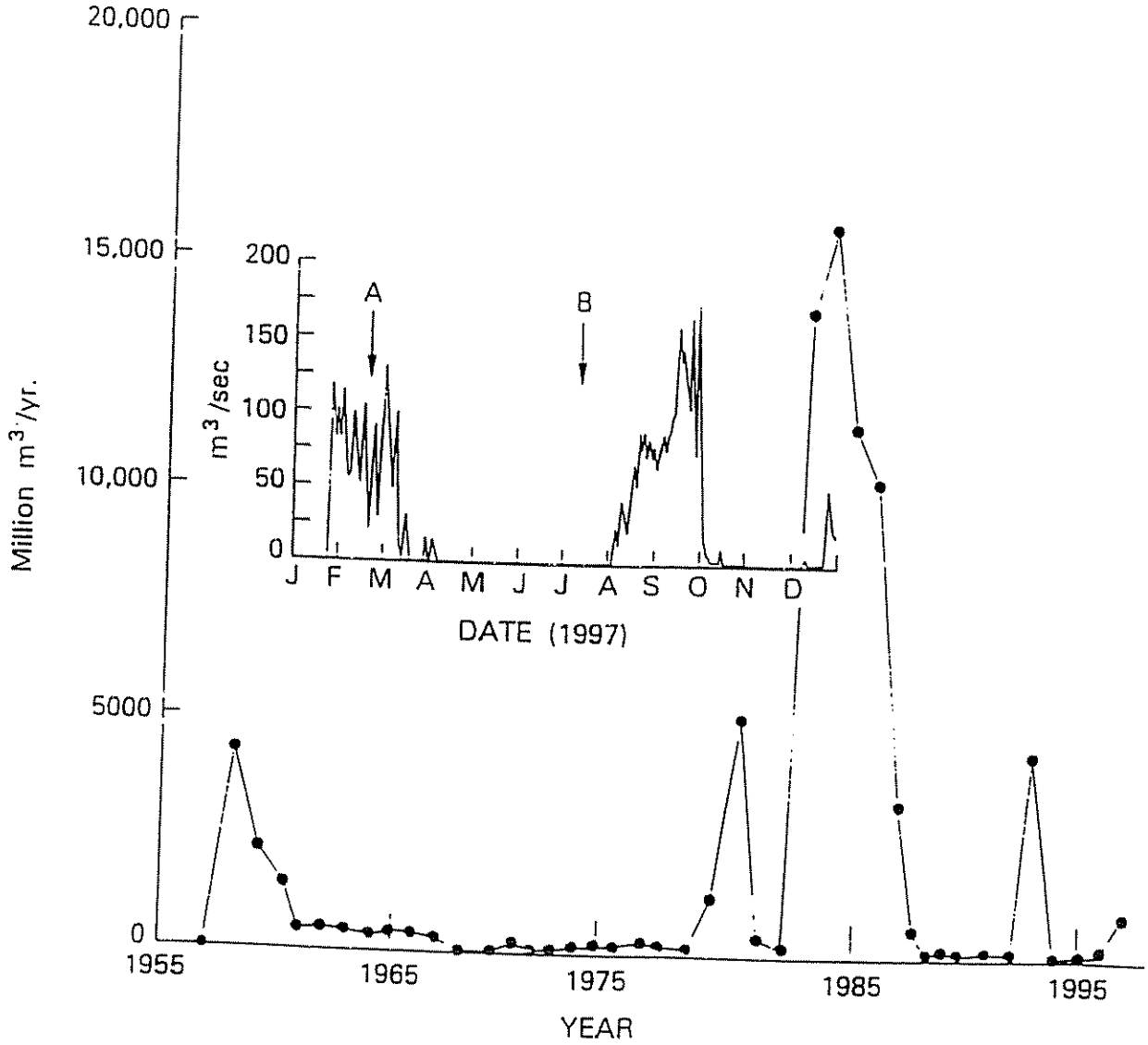
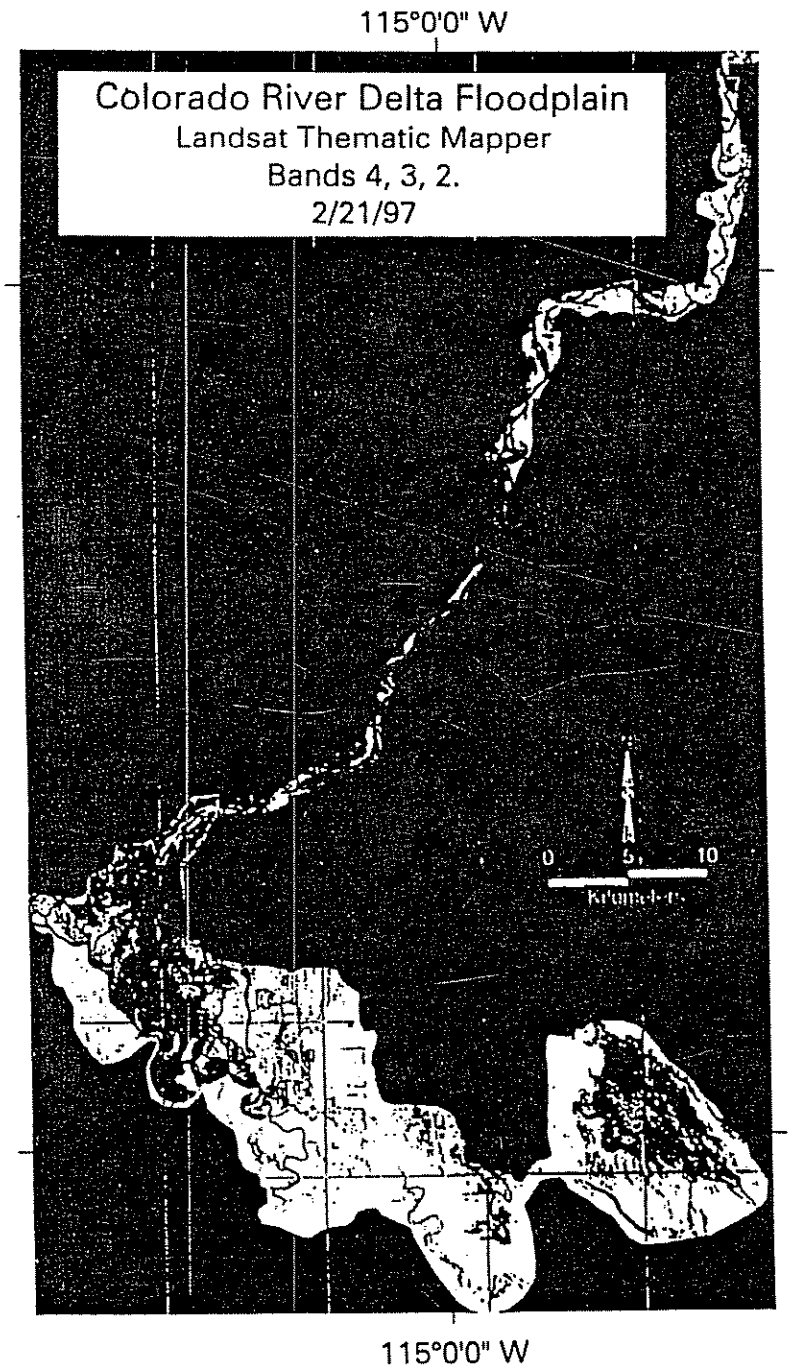


Figure 3. Satellite images of the Colorado River delta flood plain at two dates in 1997. The Feburary image was taken during flood releases of approximately 100 $m^3 s^{-1}$ and shows the major water courses; the July image was taken during a period of maximum vegetation response to winter flood releases. This is an infrared image in which red denotes high intensity vegetation while black denotes standing water.


115°0'0" W
Colorado River Delta Floodplain
Landsat Thematic Mapper
Bands 4, 3, 2.
2/21/97
32°30'0" N
32°0'0" N
0
5
10
115°0'0" W

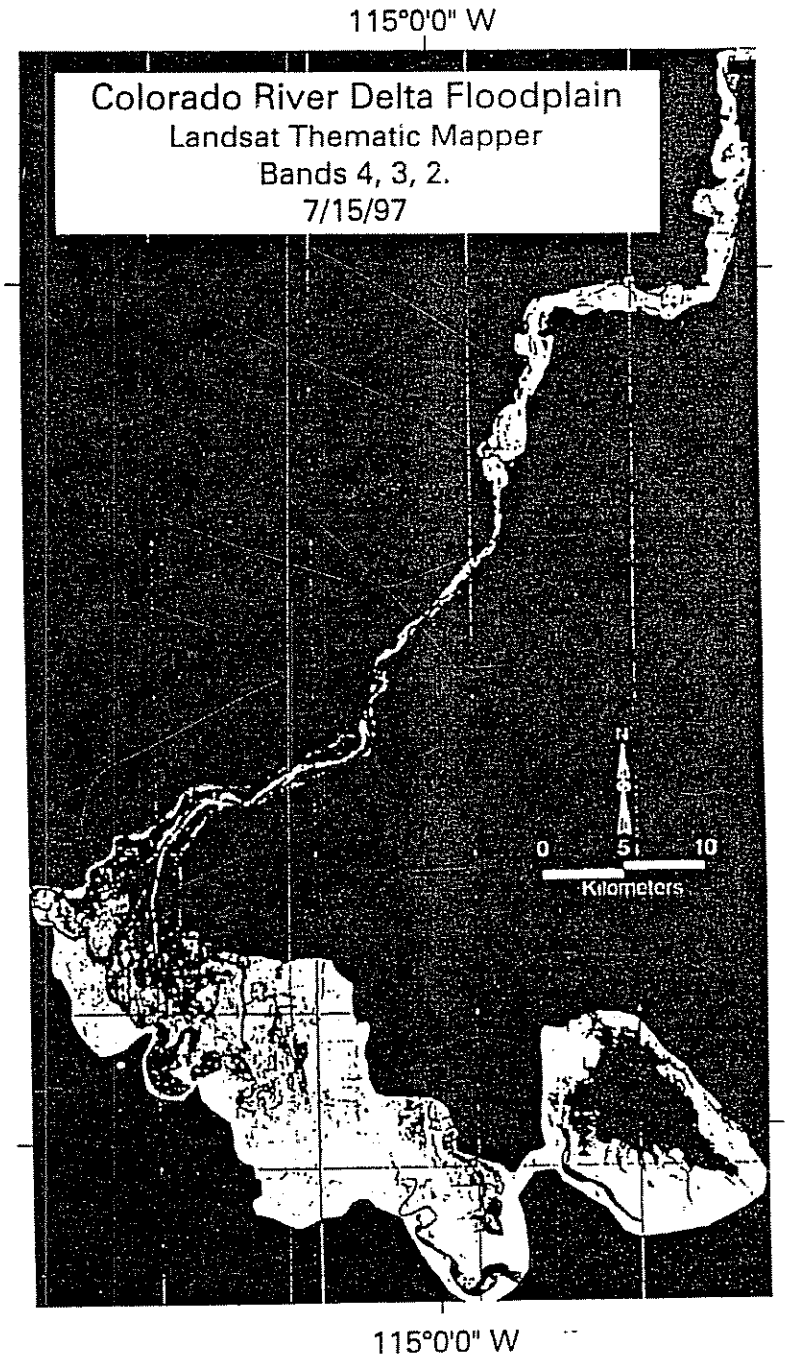
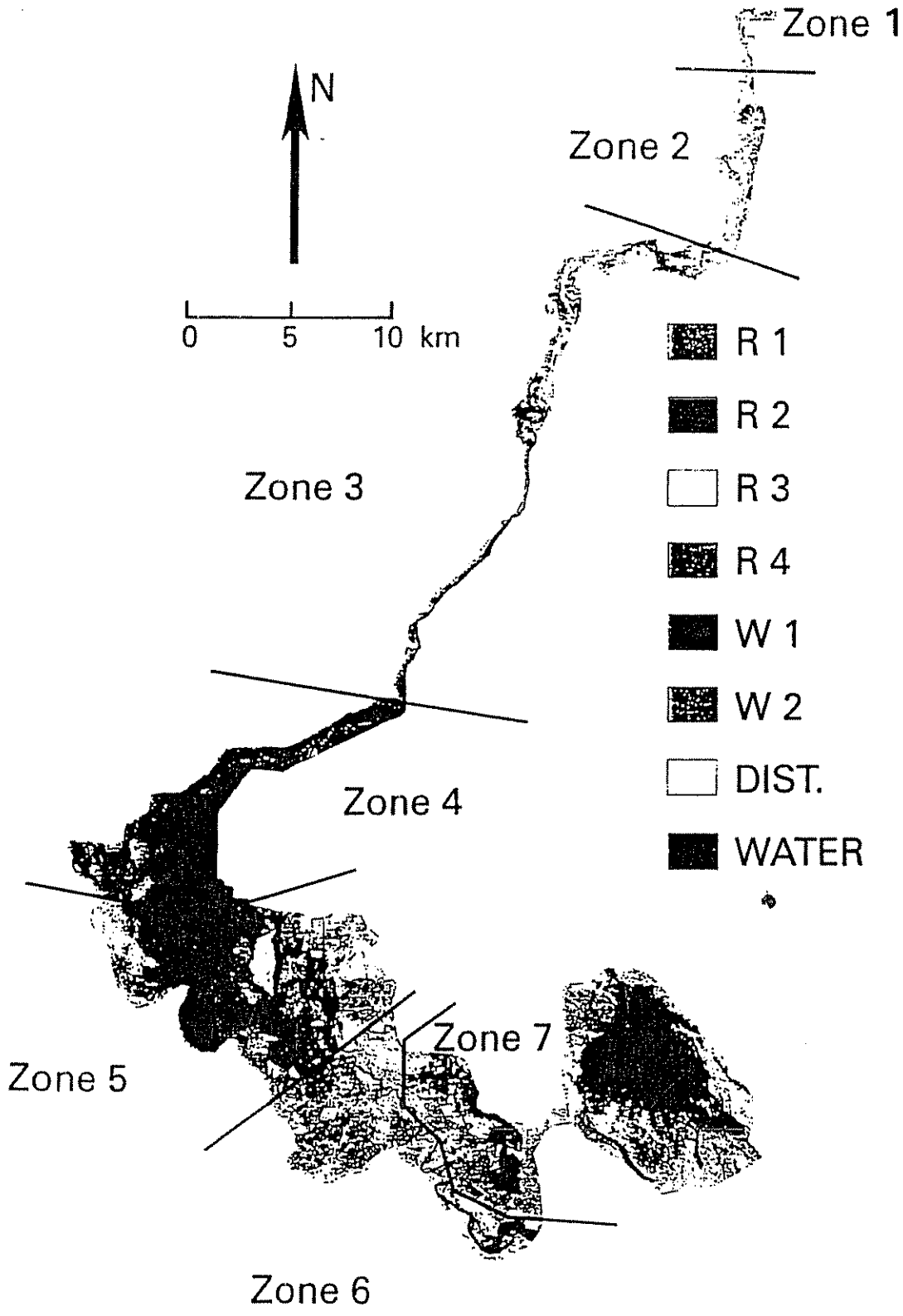

115°0'0" W
Colorado River Delta Floodplain
Landsat Thematic Mapper
Bands 4, 3, 2.
7/15/97
N
0
5
10
Kilometers
115°0'0" W

Figure 4. Vegetation analysis of the Colorado River flood plain in Mexico. The analysis was based on a July 15, 1997 Thematic Mapper satellite image. The zones were designated according to the type of dominant vegetation; zones 1-5 were dominated by woody riparian species, whereas zone 6 was the intertidal zone dominated by saltgrass and zone 7 contained hydrophyte dominated wetlands supported by agricultural drainage water. The intensity of vegetation is indicated by color codes, in which R1-R4 are different intensities of riparian vegetation (R1 most intense and R4 least intense), while W1 and W2 are two intensities of wetlands. Also shown are areas dominated by Distichlis saltgrass (DIST.) or open water.


Zone 1
N
Zone 2
0 5 10 km
R 1
R 2
R 3
R 4
W 1
W 2
DIST.
WATER
Zone 3
Zone 4
Zone 7
Zone 5
Zone 6